

Bagian : QC

Due Date : 01 Juni 2026

Tanggal : 30 April 2026

**ANALISA PERMINTAAN BARANG**

| No | Kode Barang | Nama Barang                                   | Satuan | Stok<br>Saat Ini (A) | Rencana<br>Kebutuhan (B) | Kekurangan<br>(A -B + C) | Pending<br>Penerimaan (C) | Jumlah | Realisasi<br>Pembelian | Realisasi<br>Penggunaan |
|----|-------------|-----------------------------------------------|--------|----------------------|--------------------------|--------------------------|---------------------------|--------|------------------------|-------------------------|
| 1  | IMO10028    | Jasa analisa Indeks Bias<br>Isoflurane 250 ml | Js     | 0                    | 3                        | -3                       | 0                         | 3      | 0                      | 0                       |

**Catatan :**

- Pemenuhan parameter analisa indeks bias pada produk Isoflurane 250 mL, dengan nomor batch:

1. Isoflurane BN K60025
2. Isoflurane BN K60026
3. Isoflurane BN K60027

- Pengujian external indek bias terakhir (PF000839)

- Estimasi harga pengujian: Rp.300.000 /batch.

- Pengujian dilakukan di PT Saraswanti Indo Genetech.

**Latar belakang permintaan :**

- Parameter tersebut belum dapat dilakukan analisa secara internal dikarenakan keterbatasan alat dan penunjang. Alat refraktometer yang tersedia di laboratorium QC Mersifarma memiliki range pembacaan di 1.30 - 1.70 sedangkan spek perhitungan Isoflurane berada di sekitar angka 1.2 sehingga alat tidak mampu support pembacaan. Melihat kondisi saat ini maka diperlukan pengujian external untuk pemenuhan regulasi dan perilsan produk Isoflurane 250 mL.

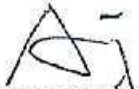
**Terlampir spesifikasi produk, USP terkini dan penawaran harga.**

Dibuat

  
P. ADA 30/26  
04

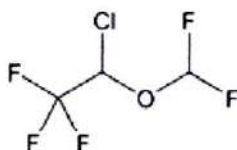
Mengetahui



|  <b>PT. MERSIFARMA TM.</b><br>DIVISI MANUFACTURING<br>SUKABUMI-INDONESIA |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>SPESIFIKASI PRODUK</b><br><b>ISOFLURANE 250 mL INHALASI</b>                                                          |                                                                                                                      | Halaman 1 dari 1<br>No. Dokumen<br>2RD10/SPSPG/32-03<br>Tanggal berlaku :<br>11 September 2021 |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------|-------------------|------------------------------------------------------|-----------------------|---------------------|-----------------------|----------------------|------------------|--------------------------------|--------------------|-----------------|-------------------|----------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------|--------------------|---------|-------------------|---------|-----------------------|--------|-----------------------|---------|------------------|---------|--------|---------|---------------|---------|----------------|-------|------------------------------|------------------------------------------------------|----------------|-------------------------------|---------------|---------------|--------------|---------------------------|
| <b>DEPARTEMEN</b><br><b>RESEARCH AND DEVELOPMENT</b>                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>SEKSI</b><br><b>FORMULASI</b>                                                                                        |                                                                                                                      | Pengganti No :<br>2RD10/SPSPG/32-02<br>Tanggal :<br>18 Agustus 2020                            |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Disusun oleh :                                                                                                                                           | Diperiksa oleh :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Disetujui oleh :                                                                                                        | Disetujui oleh :                                                                                                     |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| <br>R&D Staff Formulasi<br>Tanggal : 24/8/20                            | <br>R&D Asst/Mgr Formulasi<br>Tanggal : 24/8/20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <br>QA Asst / Mgr<br>Tanggal : 25/8/20 | <br>Plant Mgr<br>Tanggal : 26/8/20 |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Nama Sediaan                                                                                                                                             | Isoflurane 250 mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Bentuk Sediaan                                                                                                                                           | Cairan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Bahan Aktif Tiap Satuan Dosis                                                                                                                            | Isoflurane 250 mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Pustaka                                                                                                                                                  | USP 40 Tahun 2017 Vol. II Hal. 4688 - 4690, Spesifikasi Internal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Pemerian                                                                                                                                                 | Cairan jernih dan tidak berwarna, mudah menguap, sedikit berbau                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Karakteristik Fisika/<br>Kimia                                                                                                                           | <table border="0"> <tr> <td>1. Identifikasi</td> <td>: Sampel memberikan respon yang sama seperti standar</td> </tr> <tr> <td>2. Kadar</td> <td>: 99.90 % - 100.00%</td> </tr> <tr> <td>3. Volume</td> <td>: 250.00 - 258.00 mL</td> </tr> <tr> <td>4. Chloride</td> <td>: Maks. 2.11 mL AgNO3 0.0020 N</td> </tr> <tr> <td>5. Batas Fluoride*</td> <td>: Maks. 5 µg/mL</td> </tr> <tr> <td>6. Sisa penguapan</td> <td>: Maks. 2.0 mg</td> </tr> <tr> <td>7. Cemarkan Organik</td> <td> <table border="1"> <thead> <tr> <th>Nama</th> <th>Kriteria Penerimaan maks. (%)</th> </tr> </thead> <tbody> <tr> <td>Dichloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Isoflurane isomer</td> <td>0.003 %</td> </tr> <tr> <td>Cemarkan isoflurane A</td> <td>0.01 %</td> </tr> <tr> <td>Cemarkan isoflurane B</td> <td>0.007 %</td> </tr> <tr> <td>Chloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Aseton</td> <td>0.008 %</td> </tr> <tr> <td>Cemarkan lain</td> <td>0.003 %</td> </tr> <tr> <td>Total cemarkan</td> <td>0.1 %</td> </tr> </tbody> </table> </td> </tr> <tr> <td>8. Asiditas atau alkalinitas</td> <td>: Lapisan air bersifat netral terhadap kertas lakmus</td> </tr> <tr> <td>9. Indeks Bias</td> <td>: 1.2990 - 1.3005 pada 20° C.</td> </tr> <tr> <td>10. Kadar Air</td> <td>: Maks. 0.10%</td> </tr> <tr> <td>11. Partikel</td> <td>: Partikel dan serat &lt; 10</td> </tr> </table> |                                                                                                                         |                                                                                                                      |                                                                                                |         | 1. Identifikasi   | : Sampel memberikan respon yang sama seperti standar | 2. Kadar              | : 99.90 % - 100.00% | 3. Volume             | : 250.00 - 258.00 mL | 4. Chloride      | : Maks. 2.11 mL AgNO3 0.0020 N | 5. Batas Fluoride* | : Maks. 5 µg/mL | 6. Sisa penguapan | : Maks. 2.0 mg | 7. Cemarkan Organik | <table border="1"> <thead> <tr> <th>Nama</th> <th>Kriteria Penerimaan maks. (%)</th> </tr> </thead> <tbody> <tr> <td>Dichloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Isoflurane isomer</td> <td>0.003 %</td> </tr> <tr> <td>Cemarkan isoflurane A</td> <td>0.01 %</td> </tr> <tr> <td>Cemarkan isoflurane B</td> <td>0.007 %</td> </tr> <tr> <td>Chloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Aseton</td> <td>0.008 %</td> </tr> <tr> <td>Cemarkan lain</td> <td>0.003 %</td> </tr> <tr> <td>Total cemarkan</td> <td>0.1 %</td> </tr> </tbody> </table> | Nama | Kriteria Penerimaan maks. (%) | Dichloroisoflurane | 0.003 % | Isoflurane isomer | 0.003 % | Cemarkan isoflurane A | 0.01 % | Cemarkan isoflurane B | 0.007 % | Chloroisoflurane | 0.003 % | Aseton | 0.008 % | Cemarkan lain | 0.003 % | Total cemarkan | 0.1 % | 8. Asiditas atau alkalinitas | : Lapisan air bersifat netral terhadap kertas lakmus | 9. Indeks Bias | : 1.2990 - 1.3005 pada 20° C. | 10. Kadar Air | : Maks. 0.10% | 11. Partikel | : Partikel dan serat < 10 |
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| 2. Kadar                                                                                                                                                 | : 99.90 % - 100.00%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
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| 4. Chloride                                                                                                                                              | : Maks. 2.11 mL AgNO3 0.0020 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 5. Batas Fluoride*                                                                                                                                       | : Maks. 5 µg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 6. Sisa penguapan                                                                                                                                        | : Maks. 2.0 mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 7. Cemarkan Organik                                                                                                                                      | <table border="1"> <thead> <tr> <th>Nama</th> <th>Kriteria Penerimaan maks. (%)</th> </tr> </thead> <tbody> <tr> <td>Dichloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Isoflurane isomer</td> <td>0.003 %</td> </tr> <tr> <td>Cemarkan isoflurane A</td> <td>0.01 %</td> </tr> <tr> <td>Cemarkan isoflurane B</td> <td>0.007 %</td> </tr> <tr> <td>Chloroisoflurane</td> <td>0.003 %</td> </tr> <tr> <td>Aseton</td> <td>0.008 %</td> </tr> <tr> <td>Cemarkan lain</td> <td>0.003 %</td> </tr> <tr> <td>Total cemarkan</td> <td>0.1 %</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nama                                                                                                                    | Kriteria Penerimaan maks. (%)                                                                                        | Dichloroisoflurane                                                                             | 0.003 % | Isoflurane isomer | 0.003 %                                              | Cemarkan isoflurane A | 0.01 %              | Cemarkan isoflurane B | 0.007 %              | Chloroisoflurane | 0.003 %                        | Aseton             | 0.008 %         | Cemarkan lain     | 0.003 %        | Total cemarkan      | 0.1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Nama                                                                                                                                                     | Kriteria Penerimaan maks. (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Dichloroisoflurane                                                                                                                                       | 0.003 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Isoflurane isomer                                                                                                                                        | 0.003 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Cemarkan isoflurane A                                                                                                                                    | 0.01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Cemarkan isoflurane B                                                                                                                                    | 0.007 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Chloroisoflurane                                                                                                                                         | 0.003 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Aseton                                                                                                                                                   | 0.008 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Cemarkan lain                                                                                                                                            | 0.003 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Total cemarkan                                                                                                                                           | 0.1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 8. Asiditas atau alkalinitas                                                                                                                             | : Lapisan air bersifat netral terhadap kertas lakmus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 9. Indeks Bias                                                                                                                                           | : 1.2990 - 1.3005 pada 20° C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 10. Kadar Air                                                                                                                                            | : Maks. 0.10%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| 11. Partikel                                                                                                                                             | : Partikel dan serat < 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Stabilitas                                                                                                                                               | 2 tahun dalam kondisi penyimpanan yang dianjurkan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |
| Kemasan                                                                                                                                                  | Dalam wadah botol amber 250 mL, ditutup dengan inner cap, aluminium cap dan ring ungu, diberi etiket pada botol, dimasukkan ke dalam folding box diberi insert, kemudian masukkan ke styrofoam dan masukkan kedalam karton, tutup dengan plakban berlogo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                         |                                                                                                                      |                                                                                                |         |                   |                                                      |                       |                     |                       |                      |                  |                                |                    |                 |                   |                |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                               |                    |         |                   |         |                       |        |                       |         |                  |         |        |         |               |         |                |       |                              |                                                      |                |                               |               |               |              |                           |

*Handwritten signature and date: 18/08/20*

## Isoflurane



$C_3H_2ClF_5O$  184.49  
Ethane, 2-chloro-2-(difluoromethoxy)-1,1,1-trifluoro-;  
1-Chloro-2,2,2-trifluoroethyl difluoromethyl ether  
CAS RN®: 26675-46-7; UNII: CYS9AKD70P.

### DEFINITION

Isoflurane contains NLT 99.9% and NMT 100.0% of isoflurane ( $C_3H_2ClF_5O$ ).

### IDENTIFICATION

- A.** The IR absorption spectrum of Isoflurane, obtained using a gas cell, exhibits maxima only at the same wavelengths as those of a similar preparation of USP Isoflurane RS.

### ASSAY

#### PROCEDURE

**Analysis:** Using the results from the test for *Organic Impurities*, calculate the percentage of isoflurane ( $C_3H_2ClF_5O$ ) in the sample of Isoflurane taken by subtracting the sum of percentages for the impurities found from 100.0%.

**Acceptance criteria:** 99.9%–100.0%

### IMPURITIES

#### CHLORIDE

**Sample solution:** Pipet 10 mL of Isoflurane into a suitable vessel containing 60 mL of isopropyl alcohol and 4 drops of dilute nitric acid (1:1), and stir to dissolve.

**Analysis:** Titrate potentiometrically with 0.002 N silver nitrate in isopropyl alcohol VS.

**Acceptance criteria:** NMT 2.11 mL is required (NMT 10 ppm)

#### LIMIT OF FLUORIDE

Use plasticware throughout this test.

**Buffer:** Dissolve 110 g of sodium chloride and 1 g of sodium citrate in 700 mL of water in a 2-L volumetric flask. Cautiously add 150 g of sodium hydroxide, and dissolve with shaking. Cool to room temperature, and, while stirring, cautiously add 450 mL of glacial acetic acid to the cooled solution. Cool, add 600 mL of isopropyl alcohol, dilute with water to volume, and mix. The pH of this solution is between 5.0 and 5.5. [NOTE—This solution may be used for 6 weeks if stored at room temperature.]

**Solution A:** Transfer 55 mg of USP Sodium Fluoride RS to a 25-mL volumetric flask. Add 5 mL of water, and mix to dissolve. Add 1.0 mL of 0.0025 N sodium hydroxide, dilute with water to volume, and mix. Each mL of this solution contains 1 mg of fluoride ion. Store in a tightly closed plastic container. [NOTE—This solution may be used for 2 weeks if stored in a refrigerator.]

**Standard stock solution 1:** 2.0 µg/mL of fluoride in water from *Solution A*

**Standard stock solution 2:** 6.0 µg/mL of fluoride in water from *Solution A*

**Standard stock solution 3:** 10.0 µg/mL of fluoride in water from *Solution A*

**Standard stock solution 4:** 20.0 µg/mL of fluoride in water from *Solution A*

**Standard solution 1:** 1.0 µg/mL of fluoride in *Buffer* from *Standard stock solution 1*

**Standard solution 2:** 3.0 µg/mL of fluoride in *Buffer* from *Standard stock solution 2*

**Standard solution 3:** 5.0 µg/mL of fluoride in *Buffer* from *Standard stock solution 3*

**Standard solution 4:** 10.0 µg/mL of fluoride in *Buffer* from *Standard stock solution 4*

**Sample solution:** Shake 50.0 mL of Isoflurane with 50.0 mL of water for 5 min, and allow the liquids to separate completely. Transfer 25.0 mL of the water layer to a 50-mL volumetric flask, dilute with *Buffer* to volume, and mix.

### ANALYSIS

**Samples:** *Standard solutions 1–4* and *Sample solution* (See pH (791).)

Concomitantly measure the potentials in mV, of *Standard solutions 1–4* and the *Sample solution* with a pH meter capable of a minimum reproducibility of ±0.2 mV and equipped with a fluoride ion electrode and a glass-sleeved calomel reference electrode or a double-junction fluoride ion-selective combination electrode. When taking measurements, immerse the electrodes in the solution under test, which has been transferred to a 150-mL beaker containing a polytetrafluoroethylene-coated stirring bar. Allow to stir on a magnetic stirrer with an insulated top until equilibrium is attained (1–2 min), and record the potential. Rinse and dry the electrodes between measurements, taking care to avoid damaging the crystal of the fluoride ion electrode.

A satisfactory response is achieved if the difference in potential between the potentials obtained with *Standard solution 1* and *Standard solution 4*, having fluoride concentrations of 1.0 and 10.0 µg/mL, respectively, is in the range of 50–60 mV. Plot the logarithm of the fluoride ion concentrations, in µg/mL, of *Standard solutions 1–4* versus potential, in mV. From the measured potential of the *Sample solution* and the standard response line, determine the concentration, in µg/mL, of fluoride in the *Sample solution*.

**Acceptance criteria:** NMT 5 µg/mL of fluoride in the *Sample solution* [NMT 0.001% (w/v) fluoride in Isoflurane]

#### NONVOLATILE RESIDUE

**Analysis:** Transfer 10.0 mL of Isoflurane to a suitable weighed evaporating dish, evaporate with the aid of a current of air or stream of nitrogen to dryness, and dry the residue at 50° for 2 h.

**Acceptance criteria:** The weight of the residue does not exceed 2.0 mg.

### Change to read:

#### ORGANIC IMPURITIES

**Standard stock solution:** To a suitable tared vial, fitted with a septum, add 20 mL (29.8 g) of Isoflurane. Seal and reweigh the vial to determine the weight of the Isoflurane added. To this vial sequentially add 20 µL (30 mg) of USP Isoflurane Related Compound A RS, 21 µL (30 mg) of USP Isoflurane Related Compound B RS, and 38 µL (30 mg) of USP Acetone RS. Record the weight after the addition of each impurity and determine the total weight. Calculate the percentage of each impurity in the *Standard stock solution*:

$$\text{Result} = (W_i/W_T) \times P_i$$

$W_i$  = weight of each impurity added (g)  
 $W_T$  = total weight of the *Standard stock solution* (g)  
 $P_i$  = purity of each impurity added (%)

**Standard solution:** To a suitable tared vial, fitted with a septum, add 10 mL (15 g) of Isoflurane. Seal and reweigh the vial to determine the weight of the Isoflurane added.

To this vial add 300  $\mu$ L of the *Standard stock solution*, and record the weight to determine the weight of the *Standard stock solution* added and the final weight of the *Standard solution*.

Calculate the spiked concentration ( $C_s$ ) of each impurity in the *Standard solution*:

$$\text{Result} = (W_i/W_T) \times C_i$$

$W_i$  = weight of the *Standard stock solution* added (g)  
 $W_T$  = total weight of the *Standard solution* (g)  
 $C_i$  = concentration of each impurity in the *Standard stock solution* (%)

**System suitability solution:** To a suitable vial, fitted with a septum, add 10 mL (15 g) of Isoflurane. Seal the vial. To this vial add 100  $\mu$ L of the *Standard stock solution*.

**Sample solution:** Isoflurane

**Chromatographic system**

(See *Chromatography* (621), *System Suitability*.)

**Mode:** GC

**Detector:** Flame ionization

**Column:** 0.32-mm  $\times$  60-m; fused-silica capillary coated with a 1.0- $\mu$ m film of G16

**Carrier gas:** Helium

**Flow rate:** 1.7 mL/min (constant flow mode)

**Temperatures**

**Injection port:** 175°

**Detector:** 200°

**Column:** See Table 1.

Table 1

| Initial Temperature (°) | Temperature Ramp (°/min) | Final Temperature (°) | Hold Time at Final Temperature (min) |
|-------------------------|--------------------------|-----------------------|--------------------------------------|
| 40                      | —                        | 40                    | 8                                    |
| 40                      | 10                       | 170                   | 4                                    |

**Injection volume:** 2  $\mu$ L

**Injection type:** Split; split ratio, 23:1

**System suitability**

**Samples:** *Standard solution* and *System suitability solution*

**Suitability requirements**

**Tailing factor:** NMT 1.5 for acetone, *Standard solution*

**Relative standard deviation:** NMT 5% each for isoflurane related compound A, isoflurane related compound B, and acetone, *Standard solution*

**Signal-to-noise ratio:** NLT 15 for isoflurane related compound B, *System suitability solution*

**Analysis:** Injections of Isoflurane used to prepare the *Standard solution* must be made to estimate the amount of known impurities that may be present in the solvent. The final concentration of each impurity is equal to the concentration of the impurity added plus the concentration inherent in the matrix.

**Samples:** *Standard solution* and *Sample solution*

Calculate the final concentration ( $C_f$ ) of each impurity in the *Standard solution*:

$$\text{Result} = [r_U/(r_S - r_U) \times C_s] + C_s$$

$r_U$  = peak response of each impurity from the isoflurane used as the solvent  
 $r_S$  = peak response of each impurity from the *Standard solution*  
 $C_s$  = spiked concentration of each impurity in the *Standard solution* (%)

Calculate the percentage of isoflurane related compound A, isoflurane related compound B, and acetone observed in the *Sample solution*:

$$\text{Result} = (r_U/r_S) \times C_f$$

$r_U$  = peak response of each impurity from the *Sample solution*  
 $r_S$  = peak response of each impurity from the *Standard solution*  
 $C_f$  = final concentration of each impurity in the *Standard solution* (%)

Calculate the percentage of all other impurities:

$$\text{Result} = (r_U/r_S) \times {}^{\Delta}C_{FA}(\text{ERR 1-May-2023}) \times (1/F)$$

$r_U$  = peak response of the impurity from the *Sample solution*  
 $r_S$  = peak response of isoflurane related compound B from the *Standard solution*  
 ${}^{\Delta}C_{FA}(\text{ERR 1-May-2023})$  = final concentration of USP Isoflurane Related Compound B RS in the *Standard solution* (%)  
 $F$  = relative response factor relative to isoflurane related compound B (see Table 2)

**Acceptance criteria:** See Table 2.

Table 2

| Name                                | Relative Retention Time <sup>a</sup> | Relative Response Factor <sup>b</sup> | Acceptance Criteria, NMT (%) |
|-------------------------------------|--------------------------------------|---------------------------------------|------------------------------|
| Dichloroisoflurane <sup>c</sup>     | 0.41                                 | 0.28                                  | 0.003                        |
| Isoflurane isomer <sup>d</sup>      | 0.43                                 | 0.87                                  | 0.003                        |
| Isoflurane related compound A       | 0.46                                 | —                                     | 0.01                         |
| Isoflurane related compound B       | 0.56                                 | 1.00                                  | 0.007                        |
| Chloroisoflurane <sup>e</sup>       | 0.59                                 | 0.35                                  | 0.003                        |
| Acetone                             | 0.79                                 | —                                     | 0.008                        |
| Isoflurane                          | 1.00                                 | —                                     | —                            |
| Any individual unspecified impurity | —                                    | 1.00                                  | 0.003                        |
| Total impurities                    | —                                    | —                                     | 0.1                          |

<sup>a</sup> Relative to isoflurane.

<sup>b</sup> Relative to isoflurane related compound B.

<sup>c</sup> 1,1-Dichloro-1-(chlorodifluoromethoxy)-2,2,2-trifluoroethane.

<sup>d</sup> 2-(Chlorodifluoromethoxy)-1,1,1-trifluoroethane.

<sup>e</sup> 1,1-Dichloro-1-(difluoromethoxy)-2,2,2-trifluoroethane.

#### SPECIFIC TESTS

• **REFRACTIVE INDEX** (831): 1.2990–1.3005 at 20°

• **WATER DETERMINATION** (921), *Method I*: NMT 0.10%

• **ACIDITY OR ALKALINITY**

**Sample:** Transfer 5 mL of Isoflurane and 2 mL of carbon dioxide-free water to a 10-mL glass-stoppered graduated cylinder, shake for 3 min, and allow the layers to separate.  
**Analysis:** Test the aqueous layer (upper) with both red litmus paper and blue litmus paper.

**Acceptance criteria:** The aqueous layer is neutral to litmus paper. The aqueous phase should not turn the red litmus paper blue, nor should it turn the blue litmus paper red.

*Handwritten signature and date:* 19/11

Kepada Yth  
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Nomor Penawaran  
Tanggal

: SIG.MARK.PN.IX.2024.032844  
: 06 September 2024

Dengan Hormat.  
Menjawab permintaan Bapak terkait pengujian laboratorium dengan ini kami sampaikan penawaran harga uji sebagai berikut:

## 1. Isoflurane

| NO       | JENIS     | PARAMETER    | PENGUJIAN | HARGA (IDR) |
|----------|-----------|--------------|-----------|-------------|
| 1        | Non Paket | Klorida (Cl) | Normal    | 165,000     |
| Subtotal |           |              |           | 165,000     |

## 2. Isoflurane

| NO       | JENIS     | PARAMETER | PENGUJIAN | HARGA (IDR) |
|----------|-----------|-----------|-----------|-------------|
| 1        | Non Paket | Fluorida  | Normal    | 385,000     |
| Subtotal |           |           |           | 385,000     |

## 3. Sevoflurane

| NO       | JENIS     | PARAMETER | PENGUJIAN | HARGA (IDR) |
|----------|-----------|-----------|-----------|-------------|
| 1        | Non-Paket | Fluorida  | Normal    | 385,000     |
| Subtotal |           |           |           | 385,000     |

## 4. Isoflurane

| NO       | JENIS     | PARAMETER   | PENGUJIAN | HARGA (IDR) |
|----------|-----------|-------------|-----------|-------------|
| 1        | Non Paket | Indeks Bias | Normal    | 300,000     |
| Subtotal |           |             |           | 300,000     |

## 5. Sevoflurane

| NO       | JENIS     | PARAMETER   | PENGUJIAN | HARGA (IDR) |
|----------|-----------|-------------|-----------|-------------|
| 1        | Non Paket | Indeks Bias | Normal    | 300,000     |
| Subtotal |           |             |           | 300,000     |

| BIAYA PENGUJIAN (IDR) |  |  |           |
|-----------------------|--|--|-----------|
| Subtotal              |  |  | 1,535,000 |
| PPN (11%)             |  |  | 168,850   |
| Total                 |  |  | 1,703,850 |

## Catatan

- Dilampirkan surat penawaran ini saat pengiriman sampel pengujian

safer

PT SARASWANTI INDO GENETECH  
Graha SIG JI. Rasarnala No. 20 Taman Yasmin  
Bogor 16113 INDONESIA  
Phone: +62 251 7532 348 49 (Hunting ), 0821 1151 6516  
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ilac-MRA

KAN  
Laboratory Accredited  
by PTAB 0176

06/25  
01

- Sampel yang dibutuhkan minimal 50g atau 50ml persampelnya
- Lama pengujian Reguier adalah 8 hari kerja

Pelanggan diharap melakukan pembayaran uang muka sebesar 50% dari total biaya pengujian dan pelunasan sebelum tanggal estimasi uji selesai melalui transfer ke rekening :

Nama Bank : Bank Mandiri, Cabang Juanda  
Atas Nama : PT. Saraswanti Indo Genetech  
No. Rekening : 133.000.1160.811

Kirimkan bukti pembayaran ke email sales terkait dan atau paymentinfo-sig@saraswanti.com dan harap lampirkan surat penawaran saat proses memasukan sampel.

Harga yang tercantum pada surat penawaran berikut dapat berubah sewaktu-waktu tanpa pemberitahuan terlebih dahulu dan hanya berlaku untuk sampel sesuai pada surat penawaran.

Demikian penawaran ini kami sampaikan, atas perhatian serta kerjasama yang baik kami mengucapkan terima kasih.

Hormat Kami,  
PT. Saraswanti Indo Genetech

Akbar Hargiaji  
Assistant Manager Sales Non Food  
+62 8111173331

Catatan Tambahan

Dengan ini Saya setuju atas penawaran yang diberikan

\_\_\_\_\_  
Nama Pelanggan/Tanda Tangan/Tanggal/Cap Basah

Towards  
a safer world

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SYARAT DAN KETENTUAN  
SIG.MARK.PN.IX.2024.032844

**Ketentuan Persiapan Sampel**

Untuk memastikan keamanan sampel dan keakuratan hasil uji, pastikan sampel uji yang dikirim maupun diserahkan (tidak menggunakan jasa sampling SIG) dalam keadaan baik dan mewakili, sehingga kami SIG menyarankan untuk:

1. Simpan sampel uji pada wadah yang semestinya, tertutup rapat dan tidak bocor, hal tersebut guna menghindari adanya kontaminasi lingkungan
2. Gunakan wadah dengan material yang kuat, sehingga saat proses pengiriman tidak mengalami kerusakan maupun kebocoran
3. Harap infokan spesifik penanganan pada sampel uji yang membutuhkan tempat dengan penanganan khusus seperti suhu penyimpanan pada luar kemasan
4. Pastikan label identitas sampel tidak salah, hal ini berpengaruh penting pada hasil uji
5. Siapkan porsi sampel sesuai info yang diberikan (tidak kurang maupun berlebih)
6. Siapkan surat pengantar dan/atau penawaran dan/atau Purchase Order yang telah dilengkapi detail nama sample maupun ID yang akan diberikan bersamaan pengiriman/penyerahan sampel uji
7. Siapkan surat pengantar ketentuan preparasi pada sampel dengan permohonan preparasi khusus
8. SIG tidak bertanggung jawab atas kerusakan yang terjadi akibat proses pengiriman

**Ketentuan Kondisi Sampel**

1. SIG tidak menerima sampel dengan kondisi abnormal kecuali dengan persetujuan pelanggan
2. Sampel dengan kebutuhan uji kimia dan mikrobiologi wajib diberikan dalam kemasan terpisah
3. Sampel dengan kebutuhan uji mikrobiologi, karbondioksida, senyawa organik/nilai index permanganat, kadar air, keutuhan, alkohol, bilangan peroksida, bilangan iod, kelarutan oksigen, vitamin, total bakteri, klorin bebas, bobot tuntas, rongga kosong, dan total organik karbon baiknya dalam kemasan terpisah
4. Sampel dengan kebutuhan uji vitamin, kurkumin, merah sudan, total karoten, dan antioksidan sebaiknya dalam keadaan suhu terjaga dan terlindung dari paparan sinar matahari langsung
5. Sampel bahan baku sebaiknya dilengkapi dengan melampirkan COA/ MSDS produk dan info terkait kategori produk (pangan/ farmasi/kosmetik)
6. Pengujian keseragaman bobot dan keseragaman volume membutuhkan minimal 25 kemasan
7. Pengujian volume terpindahkan membutuhkan minimal 10 kemasan dan dilengkapi informasi klaim volume produk
8. Pengujian antimikroba membutuhkan minimal 120 ml atau gram per satu mikroba uji
9. Pengujian efektivitas pengawet membutuhkan minimal 120 ml atau gram per satu mikroba uji
10. Pengujian Legionella membutuhkan minimal 1000 ml
11. Pengambilan XAD 2 Trap dapat dilakukan 3-5 hari setelah info permintaan dan pembayaran dilakukan
12. Pengujian Dioxin dan Furans pada Sumber Emisi Tidak Bergerak dengan menggunakan XAD 2 Trap yang disediakan oleh SIG, tidak disarankan dikembalikan ke Lab lebih dari 30 Hari setelah XAD 2 Trap diterima oleh pelanggan
13. Apabila jumlah sampel uji tidak memenuhi ketentuan diatas, SIG tidak menerima segala bentuk keluhan dan permintaan uji ulang

**Ketentuan Pengiriman Sampel**

Kirimkan sampel uji disertai surat pengantar, surat penawaran, dan Purchase Order (jika telah tersedia) ke alamat yang dapat dipilih berikut:

**SIG Laboratory**

Graha SIG Jl. Rasamala No. 20 Taman Yasmin Kota Bogor, Jawa Barat 16113, +62 (251) 7532348

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safer world

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ilac-MRA

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KALAMATI NAMA  
10.00.000

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**Ketentuan Kontrak Pengujian**

1. Estimasi pengujian yang tertera pada kontrak sesuai dengan kesepakatan layanan yang dipilih oleh pelanggan (normal, urgent, dan/atau very urgent)
2. Perubahan estimasi pengujian dapat saja terjadi secara mendadak jika terjadi force majeure/keadaan tak biasa di laboratorium, dan pihak SIG wajib menginfokan terkait penyesuaian tersebut
3. SIG tidak merubah status kontrak uji pada pelanggan yang mengalami masalah pembayaran
4. Kekurangan sampel/sampel tambahan yang dikirimkan setelah kontrak uji dibuat akan mempengaruhi estimasi waktu pengujian yang ditetapkan semula
5. Estimasi lama pengujian dihitung keesokan harinya bila sampel diterima Customer Service kantor Bogor diatas pukul 12:00 siang dan/atau di cabang maupun perwakilan SIG lainnya
6. Pembatalan pengujian dan revisi kontrak dapat dilakukan maksimal 1x24 jam setelah kontrak diserahkan
7. Pembatalan pengujian tidak berlaku untuk pengujian mikrobiologi, logam berat dan pada pengujian dengan status urgent dan atau very urgent pada semua pengujian
8. Jika setelah 1x24 jam dari penyerahan kontrak uji pelanggan tidak memberikan notifikasi apapun, maka kontrak uji otomatis dianggap telah disetujui

**Ketentuan Pelaporan Hasil**

Sertifikat hasil pengujian diberikan sesuai estimasi yang ditentukan dalam bentuk elektronik, layanan diluar sertifikat hasil diluar estimasi waktu kontrak dan disesuaikan dengan kemampuan serta keadaan lab

**Ketentuan Penyimpanan Sampel**

SIG akan melakukan penyimpanan retain sampel atau sampel arsip dengan jumlah minimum yang dibutuhkan untuk pengujian ulang. Penyimpanan sampel akan dilakukan selama 1 bulan setelah pelaporan hasil. SIG hanya menyimpan selama 60 hari pada sampel yang diterima namun tidak disertai surat maupun identitas apapun sehingga kontrak belum diterbitkan. Diluar kebijakan diatas, SIG tidak bertanggung jawab atas kondisi sampel termasuk saat pemusnahan

**Ketentuan Pembayaran**

Setiap pelanggan wajib melunasi biaya pengujian 2 hari sebelum terbit hasil uji yang dapat dilakukan secara cash pada kasir, debit ECD, maupun transfer, terkecuali untuk pelanggan yang telah memperoleh fasilitas termin pembayaran maka pembayarannya dapat dilakukan sesuai tanggal jatuh tempo. Permintaan revisi invoice dapat dilakukan selambat-lambatnya 30 hari setelah tanggal terbit invoice. Bagi perusahaan yang dalam proses pengadaan barang/jasanya menggunakan sistem PO (purchase order), maka PO sudah harus diterima oleh PT. SIG paling lambat 1 hari sebelum tanggal estimasi selesai hasil pengujian

**Ketentuan Keluhan Pelanggan**

Saran dan keluhan pelanggan terkait teknis hasil uji maupun non-teknis seperti proses pembayaran, IT, sertifikat, dan lainnya sepenuhnya dapat disampaikan ke SIG melalui email ke [cs.sig@saraswanti.com](mailto:cs.sig@saraswanti.com), keluhan hasil uji dapat dilayani maksimal tidak lebih dari 1 bulan setelah pelaporan hasil, SIG hanya melayani 1 kali permintaan uji ulang dengan memprioritaskan uji ulang menggunakan sampel yang disimpan, SIG tidak melayani keluhan atas hasil uji swab test yang proses samplingnya dilakukan oleh pihak pelanggan, SIG tidak melayani keluhan untuk pengujian mikrobiologi, keseragaman bobot, dan keseragaman volume, SIG tidak melayani keluhan pada hasil uji dengan metode tidak sesuai dan sampel yang kemasannya abnormal/ rusak saat diterima namun pengujian terkonfirmasi oleh pelanggan tetap dijalankan.