



Certificate of Analysis

Customer number	: 160560	Lot/ Batchnumber	: 23262562
Customer name	: PT Signa Husada	Date of production	: 18.12.2023
Delivery number	: 813141918	Expiry date	: 16.12.2026
Delivery Date	: 16.05.2024	Order number	: 17344729
Material number	: 0743826	Your order number	: PH240124
Material description	: HMS Impalpable (NZ) Milled lactose monohydrate USP-NF, Ph.Eur., JP Bag, PE liner, 25 kg net		

Analysis

Chemical & Physical

Characteristic	Method of analysis	Unit	Specification	Results
Infrared absorption spectrum / Id A	USP-NF; Ph.Eur.; JP		Conforms to reference	Pass
Water / Id D Ph.Eur.	USP-NF; Ph.Eur.; JP	%(m)	4.5-5.5	5.1
Appearance of solution	Ph.Eur.		Not more intensely coloured than ref BY7	Pass
Lactose colour of sol.	USP-NF; JP		Nearly colourless	Pass
Lactose clarity of sol.	USP-NF; Ph.Eur.; JP		Clear	Pass
UV-Abs. 1% sol. 210-220 nm	USP-NF; Ph.Eur.; JP		0.00-0.25	0.02
UV-Abs. 1% sol. 270-300 nm	USP-NF; Ph.Eur.; JP		0.00-0.07	0.01
UV-Abs. 10% sol. 400 nm	USP-NF; Ph.Eur.; JP		0.00-0.04	0.00
Acidity (0.1N NaOH/6g)	USP-NF; Ph.Eur.; JP	ml	0.0-0.4	0.2
Specific optical rotation (anhydrous bas	USP-NF; Ph.Eur.; JP	Degree	54.4-55.9	55.1
Heavy Metals	USP-NF; Ph.Eur.; JP		max 5 ppm	Pass
Loss on Drying (2 hrs, 80°C)	USP-NF; JP	%(m)	0.0-0.5	0.0
Residue on ignition / Sulfated ash	USP-NF; Ph.Eur.; JP	%(m)	0.0-0.1	<0.1

Microbiological

Characteristic	Method of analysis	Unit	Specification	Results
Total Aerobic Micro Count	Pharmacopeia Harmonized Methods	cfu/g	0-100	<100
Total Yeast & Mould Count	Pharmacopeia Harmonized Methods	cfu/g	0-10	<10
Escherichia coli (10 g)	Pharmacopeia Harmonized Methods		Negative	Negative
Salmonella (750g)	equal to ISO 6579		Negative	Negative

OTHERS

Characteristic	Method of analysis	Unit	Specification	Results
Particle size <75 µm	Internal, ATM sonic sifter	%(m)	78-86	81
Particle size <180 µm	Internal, ATM sonic sifter	%(m)	>=98	99



DFE
pharma

DFE Pharma GmbH & Co. KG / PO Box 20 21 20 / D-47568 Goch

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Remarks

Product Description: alpha-lactose monohydrate pharmaceutical grade

Identification: conforms USP-NF, Ph.Eur, JP current at time of manufacture.

Characteristics: A white or almost white, odourless, crystalline powder freely soluble in water, practically insoluble in ethanol.

Residual solvents: CPMP/ICH/283/95 and USP-NF Chapter 467
No class 1, 2, 3 solvents are used during production.

Production Site:

Fonterra Limited, Kaponga, New Zealand

Released by: Adora Joy Torres
Released on: Feb 22, 2024



✓ RRS at 15:57:12, 20/05/2024

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Manufacturer: DFE Pharma GmbH & Co. KG, Goch, Germany (formerly named "DMV-Fonterra Excipients GmbH & Co. KG")

STANDARISASI CERTIFICATE OF ANALYSIS BAHAN BAKU

No	Nama Bahan	Manufaktur	Referensi pada CoA Manufacturer saat ini	Referensi pada CoA yang diusulkan	Penyesuaian Parameter			Nomor SPDB	Keterangan
					Parameter yang Dihilangkan	Parameter yang Ditambah	Parameter yang direvisi		
1	Lactose Monohydrate	DFE Pharma	USPP/EP/IP	USP 47/FI VI	Appearance of Solution	Pemerian disesuaikan dengan USP 47	MICROBAL LIMIT TEST disesuaikan dengan Usp 47	RD.02-SBP/049.03	Penyesuaian CoA dari Manufacturer
					-	Kelarutan disesuaikan dengan USP 47	-		
						Identifikasi KLT (USP 47)			

Diperiksa Oleh,

Disetujui Oleh,


25/10/24
Koordinator QC


25/10/24
Koordinator TS


25/10/24
Koordinator QA


25/10/24
Manager QA

Ixabepilone: White or almost white powder. Slightly soluble in acetonitrile.

Juniper Tar: Dark brown, clear, thick liquid, having a tarry odor and a faintly aromatic, bitter taste. Sparingly soluble in solvent hexane; very slightly soluble in water. One volume dissolves in 9 volumes of alcohol. Dissolves in 3 volumes of ether, leaving only a slight, flocculent residue. Miscible with amyl alcohol, with chloroform, and with glacial acetic acid.

Kanamycin Sulfate: White, odorless, crystalline powder. Freely soluble in water; insoluble in acetone, in ethyl acetate, and in benzene.

Kaolin: Soft, white or yellowish-white powder or lumps. Has an earthy or clay-like taste and, when moistened with water, assumes a darker color and develops a marked clay-like odor. Insoluble in water, in cold dilute acids, and in solutions of alkali hydroxides. *NF category:* Diluent; suspending and/or viscosity-increasing agent.

Ketamine Hydrochloride: White, crystalline powder, having a slight, characteristic odor. Freely soluble in water and in methanol; soluble in alcohol; sparingly soluble in chloroform.

Ketorolac Tromethamine: White to off-white, crystalline powder. Melts between 165° and 170°, with decomposition. Freely soluble in water and in methanol; slightly soluble in alcohol, in dehydrated alcohol, and in tetrahydrofuran; practically insoluble in acetone, in dichloromethane, in toluene, in ethyl acetate, in dioxane, in hexane, in butyl alcohol, and in acetonitrile.

Labetalol Hydrochloride: White to off-white powder. Melts at about 180°, with decomposition. Soluble in water and in alcohol; insoluble in ether and in chloroform.

Lacosamide: White to light yellow powder. Freely soluble in methanol; soluble in anhydrous ethanol; sparingly soluble in water; slightly soluble in acetonitrile; and practically insoluble in heptane.

Alpha-Lactalbumin: Free-flowing, slightly hygroscopic light cream-colored powder. Freely soluble in water; soluble in wide pH ranges; insoluble in methanol, in alcohol, in ether, and in acetone. *NF category:* Bulking agent; coating agent; emulsifying agent; stiffening agent; suspending and/or viscosity-increasing agent; diluent; wet binder; vehicle (solid carrier); pH modifier (acidifying agent/alkalizing agent/buffering agent); chelating and/or complexing agent.

Lactic Acid: Colorless or yellowish, practically odorless, syrupy liquid. Is hygroscopic. When it is concentrated by boiling, lactic acid lactate is formed. Specific gravity is about 1.20. Insoluble in chloroform. Miscible with water, with alcohol, and with ether. *NF category:* pH modifier (acidifying agent/alkalizing agent/buffering agent).

Lactitol: A white or light brown, odorless crystal. Has a mild, sweet taste, and no aftertaste. *NF category:* Flavors and fragrance; diluent; sweetening agent.

Lactobionic Acid: White or almost white, crystalline powder with a melting point of about 125° with decomposition. Freely soluble in water; slightly soluble in glacial acetic acid, in anhydrous ethanol, and in methanol. *NF category:* Antioxidant.

Anhydrous Lactose: White or almost white powder. Freely soluble in water; practically insoluble in alcohol. *NF category:* Diluent; carrier.

Lactose Monohydrate: White, free-flowing powder. Freely but slowly soluble in water; practically insoluble in alcohol. *NF category:* Diluent; carrier; wet binder.

Lactulose Concentrate: Colorless to amber syrupy liquid, which may exhibit some precipitation and darkening upon standing. Miscible with water.

Lamivudine: White to off-white solid. Soluble in water. Melts at about 176°.

Lamotrigine: White to pale cream-colored powder. Slightly soluble in 0.1 N hydrochloric acid, in acetone, and in methanol; very slightly soluble in water.

Lanolin: Yellow, tenacious, unctuous mass, having a slight, characteristic odor. Freely soluble in ether and in chloroform; soluble in hot alcohol; sparingly soluble in cold alcohol; insoluble in water, but mixes without separation with about twice its weight of water. *NF category:* Emulsifying agent; ointment base.

Hydrogenated Lanolin: White or pale yellow, unctuous substance. Soluble in boiling dehydrated alcohol and in light petroleum; insoluble in water. *NF category:* Emulsifying agent; emollient; humectant; ointment base.

Lanolin Alcohols: Hard, waxy, amber solid, having a characteristic odor. Freely soluble in chloroform, in ether, and in petroleum ether; slightly soluble in alcohol; insoluble in water. *NF category:* Emulsifying agent; ointment base.

Lansoprazole: White to brownish-white powder. Freely soluble in dimethylformamide; practically insoluble in water. Melts at about 166°, with decomposition.

Latanoprost: Colorless to slightly yellow oil. Very soluble in acetonitrile; freely soluble in acetone, in ethanol, in ethyl acetate, in isopropanol, in methanol, and in octanol; practically insoluble in water.

Lauric Acid: White or faintly yellow, somewhat glossy, crystalline solid or powder. Very soluble in alcohol, in ether, and in methanol; soluble in acetone; practically insoluble in water. *NF category:* Antifoaming agent; emulsifying agent; lubricant.

Lauroyl Polyoxylglycerides: Pale yellow semi-solids. Freely soluble in methylene chloride. Dispersible in hot water. *NF category:* Ointment base; solvent; emulsifying agent; wetting and/or solubilizing agent.

Lecithin: The consistency of both natural grades and refined grades of lecithin may vary from plastic to fluid, depending upon free fatty acid and oil content, and upon the presence or absence of other diluents. Its color varies from light yellow to brown, depending on the source, on crop variations, and on whether it is bleached or unbleached. It is odorless or has a characteristic, slight nut-like odor and a bland taste. Practically insoluble in water, but it readily hydrates to form emulsions. The oil-free phosphatides are soluble in fatty acids, but are practically insoluble in fixed oils. When all phosphatide fractions are present, lecithin is sparingly soluble in alcohol and practically insoluble in acetone. *NF category:* Emulsifying agent; emollient.

Leflunomide: White to almost white powder. Freely soluble in methanol, in alcohol, in 2-propanol, in ethyl acetate, in acetone, and in acetonitrile; practically insoluble in water.

Letrozole: White to yellowish, crystalline powder. Freely soluble in dichloromethane; slightly soluble in alcohol; practically insoluble in water.

Leucine: White, practically odorless, tasteless crystals. Sparingly soluble in water; insoluble in ether. *NF category:* Flavors and fragrance.

Leucovorin Calcium: Yellowish-white or yellow powder. Slightly soluble to freely soluble in water; practically insoluble in alcohol.

Leucovorin Calcium Injection: Clear, yellowish solution.

Levamisole Hydrochloride: White or almost white, crystalline powder. Freely soluble in water; soluble in alcohol; slightly soluble in methylene chloride; practically insoluble in ether.

Levetiracetam: White to almost white powder. Very soluble in water; soluble in acetonitrile; practically insoluble in hexane.

Levmetamfetamine: Clear, practically colorless liquid.

Lactose Monohydrate

Portions of the monograph text that are national *USP* text, and are not part of the harmonized text, are marked with symbols (*, .) to specify this fact.

DEFINITION

Lactose Monohydrate is the monohydrate of
O-β-D-galactopyranosyl-(1→4)-α-D-glucopyranose.
[NOTE—Lactose Monohydrate may be modified as to its physical characteristics. It may contain varying proportions of amorphous lactose.]

IDENTIFICATION

Change to read:

- **A. [▲]SPECTROSCOPIC IDENTIFICATION TESTS** (197), *Infrared Spectroscopy*: **197K[▲]** (CN 1-May-2020)

- **B. THIN-LAYER CHROMATOGRAPHIC IDENTIFICATION TEST** (201)

Diluent: Methanol and water (3:2)

Standard solution A: 0.5 mg/mL of USP Lactose Monohydrate RS in *Diluent*

Standard solution B: 0.5 mg/mL each of USP Dextrose RS, USP Lactose Monohydrate RS, USP Fructose RS, and USP Sucrose RS in *Diluent*

Sample solution: 0.5 mg/mL of Lactose Monohydrate in *Diluent*

Adsorbent: 0.25-mm layer of chromatographic silica gel

Application volume: 2 μL

Developing solvent system: Ethylene dichloride, glacial acetic acid, methanol, and water (10:5:3:2)

Spray reagent: 5 mg/mL of thymol in a mixture of alcohol and sulfuric acid (19:1)

Analysis

Samples: *Standard solution A*, *Standard solution B*, and *Sample solution*

Allow the spots to dry, and develop the plate in a paper-lined chromatographic chamber equilibrated with *Developing solvent system* for about 1 h prior to use. Allow the chromatogram to develop until the solvent front has moved about three-quarters of the length of the plate. Remove the plate from the chamber, dry in a current of warm air, and redevelop the plate in fresh *Developing solvent system*. Remove the plate from the chamber, mark the solvent front, and dry the plate in a current of warm air. Spray the plate evenly with *Spray reagent*. Heat the plate at 130° for 10 min.

System suitability: The test is not valid unless the chromatogram of *Standard solution B* shows four clearly discernible spots, disregarding any spots at the origin.

Acceptance criteria: The principal spot from the *Sample solution* corresponds in appearance and *R_F* value to that from *Standard solution A*.*

IMPURITIES

- **RESIDUE ON IGNITION** (281)

Analysis: A sample ignited at a temperature of 600 ± 50°

Acceptance criteria: NMT 0.1%

SPECIFIC TESTS

- **CLARITY AND COLOR OF SOLUTION**

Sample solution: 1 g in 10 mL of boiling water

Analysis: The *Sample solution* is clear and nearly colorless.

Determine the absorbance of this solution at a wavelength of 400 nm.

Acceptance criteria: The absorbance divided by the path length, in cm, is NMT 0.04.

- **MICROBIAL ENUMERATION TESTS** (61) and **TESTS FOR SPECIFIED MICROORGANISMS** (62): The total aerobic microbial count does not exceed 1×10^2 cfu/g, the total combined molds and yeasts count does not exceed 5×10^1 cfu/g, and it meets the requirements of the test for absence of *Escherichia coli*.

- **OPTICAL ROTATION**, *Specific Rotation* (781S)

Sample solution: Dissolve 10 g by heating in 80 mL of water to 50°. Allow to cool, and add 0.2 mL of 6 N ammonium hydroxide. Allow to stand for 30 min, and dilute with water to 100 mL.

Acceptance criteria: +54.4° to +55.9°, calculated on the anhydrous basis, determined at 20°

- **ACIDITY OR ALKALINITY**

Sample solution: Dissolve 6 g by heating in 25 mL of carbon dioxide-free water, cool, and add 0.3 mL of phenolphthalein TS.

Acceptance criteria: The solution is colorless, and NMT 0.4 mL of 0.1 N sodium hydroxide VS is required to produce a pink or red color.

- **LOSS ON DRYING** (731)

Analysis: Dry a sample at 80° for 2 h.

Acceptance criteria

Monohydrate: NMT 0.5%

Monohydrate, modified: NMT 1.0%,

- **WATER DETERMINATION**, *Method I* (921)

Sample solution: Prepare a preparation containing Lactose Monohydrate in a mixture of methanol and formamide (2:1).

Acceptance criteria: 4.5%–5.5%

- **PROTEIN AND LIGHT-ABSORBING IMPURITIES**

(See *Ultraviolet-Visible Spectroscopy* (857).)

Sample solution: 1% (w/v)

Analysis: Measure the light absorption of the *Sample solution* in the range of 210–300 nm.

Acceptance criteria: The absorbance divided by the path length, in cm, is NMT 0.25 in the range of 210–220 nm and is NMT 0.07 in the range of 270–300 nm.

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in tight containers.
- **LABELING:** Where the labeling states the particle size distribution, it also indicates the *d*₁₀, *d*₅₀, and *d*₉₀ values and the range for each. For modified Lactose Monohydrate, also label it to indicate the method of modification.
- **USP REFERENCE STANDARDS** (11)
 - USP Dextrose RS
 - USP Fructose RS
 - USP Lactose Monohydrate RS
 - USP Sucrose RS