TO THE ATTENTION OF:

Capsugel
A Lonza Company

CERTIFICATE OF ANALYSIS

The capsules are produced under carefully controlled conditions. Controls are performed continuously throughout the process and guarantee that capsules conform to the highest quality standards. The capsules described below conform to the specifications as defined in the current edition of the Capsugel "Technical Reference File".

PRODUCT DESCRIPTION Empty Hard Gelatin Capsules - Coni-Snap® (Bovine, Standard)

Customer:	CAPATREX EU	Lot Number:	3662830
Product Name:	HGC Size 0 SCARLET	Customer Reference:	CAPATREX EU
Product Code:	006879-17	Product Size:	Size 0, Coni-Snap, Standard
Manufacturing Date:	12-Jun-2024		
Expiration Date:	11-Jun-2029		

BODY		**CAP**	
Code:	32.364	Code:	32.364
Name:	SCARLET OP. C364	Name:	SCARLET OP. C364
Print Type:	Non-Print		

Body Composition		**Cap Composition**	
Azorubine - Carmoisine	0.1400 %	Azorubine - Carmoisine	0.1400 %
Red Iron Oxide	0.2000 %	Red Iron Oxide	0.2000 %
Titanium dioxide	0.5000 %	Titanium dioxide	0.5000 %
Yellow iron oxide	0.4500 %	Yellow iron oxide	0.4500 %
GELATIN	qsp 100 %	GELATIN	qsp 100 %

Due to the nature of raw materials, their sourcing, and technology improvements, the colorant composition data indicated are target values and actual values may vary to insure the consistency of lot color. Capsugel supports the expiry date if precautions for warehousing and transportation are observed (recommended: 15°C - 25°C and 35% - 65% relative humidity).

Ingredient / Reference	**E Nr**	**C.I. Nr**	**Function**	**Regulatory References**
Azorubine - Carmoisine	E122	14720	Colorant	(EU) 231/2012
Red Iron Oxide	E172	77491	Colorant	(EU) 231/2012, 21 CFR, JPE, USP/NF
Titanium dioxide	E171	77891	Opacifier	(EU) 231/2012, 21 CFR, EP, JP, USP/NF
Yellow iron oxide	E172	77492	Colorant	(EU) 231/2012, 21 CFR, JPE, USP/NF
GELATIN			Structure	EP, JP, USP/NF, CHP

ANALYTICAL DATA

Characteristics	**Test Method**	**Units**	**Specifications**	**Results**
Identification of gelatin	TRF 001A		Positive	pass *
Identification of TiO2	TRF 007A		Conforms to composition	pass *
Identification of dyestuffs	TRF 005B		Conforms to composition	pass
Identification of iron oxides	TRF 006A		Conforms to composition	pass *
Sulphated ash	TRF 200A	%	Less than 7	pass *
Lubricant content (Soxtherm)	TRF 202B	%	Less than 0.5	0.02 *
Sulphur dioxide	TRF 201A	ppm	Not more than 10	0 *
Disintegration time	TRF 300A	min/sec	Less than 10:00	02:41 *
Loss on drying	TRF 101A	%	13.0 to 16.0	14.7
Average weight	TRF 100A	mg	90.0 to 102.0	98.0
Solubility and acidity or alkalinity	TRF 103A		Odorless and neutral or slightly acidic	pass *
Total Aerobic Microbial Count	TRF 500A	cfu / g	Less than 1000	<10
Escherichia coli	TRF 520A		Absence in 1 gram	pass *
Salmonella	TRF 550A		Absence in 10 gram	pass *
Staphylococcus aureus	TRF 530A		Absence in 1 gram	pass *
Pseudomonas aeruginosa	TRF 540A		Absence in 1 gram	pass *
Total Yeasts/Moulds Count	TRF 510A	cfu / g	Less than 100	< 10 *

*** Reduced frequency testing**

Elemental Impurities / Heavy Metals

With reference to ICH Q3D and other applicable standards controlling levels of elemental impurities in drug products and food supplements, Capsugel empty capsule products are meeting below levels of applicable elements. Monitoring testing is in place under validated methods, as described in the current edition of Capsugel's applicable Technical Reference File. A documented risk assessment based on the ICH Q3D principles is available on www.mycapsugel.com.

Element	**Unit**	**Acceptance Level**
Arsenic	ppm	Not more than 1
Lead	ppm	Not more than 1
Cadmium	ppm	Not more than 0.5
Mercury	ppm	Not more than 0.1
Cobalt	ppm	Not more than 5
Vanadium	ppm	Not more than 10
Nickel	ppm	Not more than 20
Chromium	ppm	Not more than 2

CERTIFICATE OF ANALYSIS

Customer Name: Vladislav Vanek

Lot Nr: 3662830

Residual Solvent Statement

In accordance with ICH Q3C residual solvent guideline, Class 3 solvents may be used according to good manufacturing practices such that their cumulative value does not exceed 5000ppm or 0.5%, under option 1 as defined in ICH Q3C, USP<467>, and EP General Text 5.4.

Physical Characteristics

Defect levels are in conformance with the Coni-Snap® Sigma Series specification for Visual attributes, as defined in the table below.

Defect Group	Class I	Class II	Class III
	Visual	Visual	Visual
Sigma Level	5.4	5.1	4.3
PPM	<50	<150	<2500

Appearance - Clean empty capsules, meeting the specified requirements of color and size.
Odor - Free of disagreeable odor.
The reported disintegration time is subjective, and is provided to indicate Pass/Fail status for 10 minutes.
Empty hard gelatin capsules are conform with the Japanese Pharmacopoeia monograph for capsules.

TSE/BSE Regulations

For this empty capsule product, Lonza can use blends of several gelatins of bovine origin only. Related to the specific regulations aiming to secure the TSE/BSE safety, Lonza sources bovine gelatin fully complying with the following:
International Guidance
OIE – Terrestrial Animal Health Code – Chapter 11.4 BSE.
Europe:
Note for guidance on minimizing the risk of transmitting animal spongiform encephalopathy agents via human and veterinary medicinal products (EMA/410/01 rev.3), which is published by the European Commission following Commission Directive 2003/63/EC, (amending Directive 2001/83/EC on the Community code relating to medicinal products for human use), Annex I, Part I, paragraph 3.2.2.4. Control of excipients.
These Directives require that applicants for Marketing Authorization must demonstrate that medicinal products are manufactured in accordance with the latest version of this Note for Guidance and compliance is demonstrated by the "Certificate of Suitability" issued to the manufacturer of the bovine gelatin by the European Directorate for the Quality of Medicines (EDQM). As such, from May 2024, Lonza manufactures capsules under any (or all) of the following Certificates of Suitability:

- Rousselot R1-CEP 2000-029-Rev 06
- Rousselot R1-CEP-2010-043-Rev 00
- Tessenderlo Group CEP 2000-045-Rev 06
- Gelita Group R1-CEP 2001-424-Rev 03
- Sterling Gelatin R1-CEP 2001-211-Rev 01
- Nitta Gelatin R1-CEP 2000-344-Rev 03
- Nitta Gelatin R1-CEP 2005-217-Rev 02
- Pioneer Jellice R1-CEP 2008-048-Rev 00

Regulation (EC) No 853/2004 laying down specific hygiene rules for food of animal origin.
Regulation (EC) No 999/2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies.
US:
United States Food and Drug Administration - 21 CFR Part 189 – "Substances Prohibited from Use in Human Food: Prohibited Cattle Materials.
United States Department of Agriculture (USDA) – 9 CFR 94.23 Importation of Gelatin Derived from Bovines.
Japan:
Japanese Ministry of Health, Labor Welfare (MHLW) - "Food Sanitation Law", Chapter 2, Article 7 and Article 10 "Specifications and Standards for Food or additives" revised and announced by MHLW Notice No.0327-2 of March 27, 2015.
The bovine bone starting material is derived from healthy animals that were slaughtered in a slaughterhouse and that passed an ante-mortem and post-mortem inspection by an official veterinarian.
For what concerns specified risk materials (SRMs), for this product, the bovine gelatin applied does not contain skulls and spinal cord, but may contain vertebrae of animals younger than 30 months old, depending on the geographical origin.
Lonza continuously monitors all regulatory activities; please let us know if there are further questions or clarification needed.

Manufacturing Processes:

No Addition of Preservatives
No Ethylene Oxide Treatment
No Irradiation Treatment

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Digitally approved by Tom Van Den Bossche (Jun 24 2024, 13:09:08)
Authorized Signer