

MID-WESTNUTRITION

925 W 6th St Fremont NE 68025
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Product Name	Chondroitin Sulfate (Porcine)
Batch Number	CS201701020
MFG. Date	Dec. 28, 2016
EXP. Date	Dec. 27, 2018
Country of Origin	China

Items of Analysis	Specification	Results
Assay by CPC (dry basis)	≥ 90%	93.46%
Assay by CPC (as is)	Report (as is)	84.91%
Assay by EHPLC (dry basis)	≥ 90%	91.95%
Assay by EHPLC (as is)	Report (as is)	83.54%
Loss on drying	≤ 10%	9.14%
Description	White to off-white powder	Complied
Particle Size	Pass 80 mesh	80 mesh
Limit of Protein	≤ 6.0%	2.36%
Heavy Metals	≤ 10 µg/g	Complied
pH	5.5 – 7.5	6.9
Specific Rotation	-20.0° – -30.0°	-27.64°
Residue on Ignition	20.0% – 30.0%	23.73%
Chloride	≤ 0.5%	Complied
Sulfate	≤ 0.24%	Complied
Total Bacterial Count	≤ 1,000 cfu/g	60 cfu/g

Conclusion: This batch of product meets **USP39** standard.

ANALYST: GAO PING

CHECKER: LI JIE



ANALYTICAL LABORATORIES IN ANAHEIM, INC.

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Attn: Anthony Salemno
Receive Date: 02/06/2017
Report Date: 02/20/2017

Job#: 94468 Sample: RW00B38, Chondroitin Sulfate (Porcine)
Lot#: CS201701020

Analysis	Result (as is)	Result (dry base)
Chondroitin disaccharide Δ di-4S sodium salt	49.0%	
Chondroitin disaccharide Δ di-6S sodium salt	17.0%	
Chondroitin disaccharide Δ di-0S sodium salt	7.48%	
Total Chondroitin disaccharide	73.5%	80.2%
(Equivalent to USP Chondroitin Sulfate Reference Standard)		
Chondroitin Sulfate A	57.3%	
Chondroitin Sulfate C	19.8%	
Nonsulfate chondroitin	8.74%	
Total Chondroitins (Enzymatic HPLC)	85.8%	93.7%
Loss on Dry	8.41%	

Method: ALC150A (Enzymatic-HPLC);

Chondroitin disaccharide di-0S sodium salt, Sigma C3920 010M1203

Chondroitin disaccharide di-4S sodium salt, Sigma C4045 010M1206

Chondroitin disaccharide di-6S sodium salt, Sigma C4170 098K1122

USP Reference Standard: cat# 1133570, lot# R039A0

Dry condition: 105 C for 4 hours.

02/20/2017

Chemist:

Director, David Ji: