



CERTIFICATE OF ANALYSIS

PMC Biogenix, Inc
 1231 Pope Street
 Memphis, TN, 38108
 United States
 Phone : 800 641 2152
 Fax : 800 641 2153
 VAT # : FR83 512 461 435

To : BRENNTAG MID SOUTH INC
 317 WAUHTCHIE PIKE,
 CHATTANOOGA, TN, 37409, United States
 A/c # : 18512

ATTN :
 Fax# :

Customer PO Number : 689110
 Sales Order Number : 1469539
 Ship Date : 13-MAR-2017
 Material : 10110
 Customer Item Code : 499809
 Note : MATERIAL CODE: 499809
 Batch : MEM-659533 Batch Qty : 30,000.00 LBS
 Manufacture Date : 07-MAR-2017

BOL Number : 141016874
 Carrier/Trailer Number : CUSTOMER ROUTED
 Way Bill Number :
 HYSTRENE 5016 NF FOOD GRADE FLAKE/50LB OMP BG
 STEARIC HYSTRENE 5016 NF FG FLAKE/50LB OMP BG
 Order Qty : 30,000 LBS
 Review Date : 25-FEB-2019

Characteristic	Unit	Value	Lower	Upper	Method
			Limit	Limit	
* ACID NUMBER	mgKOH/g	208.90	206.00	210.00	FA1003
* ACIDITY		PASS			NF
* COLOR STANDARD BY		PASS			NF
* COLOR STANDARD Y		PASS			NF
* GLC C16+C18	%	99.5	90.0	100.0	FA1015
* GLC-C14	%	0.2	0.0	5.0	FA1015
* GLC-C16	%	52.4	46.0	56.0	FA1015
* GLC-C18	%	47.1	40.0	50.0	FA1015
* HEAVY METALS	%	0.0000	0.0000	0.0010	NF
* IDENTIFICATION A - FREEZING POINT	Deg C	54.2	53.0	59.0	NF
* IDENTIFICATION B - ACID NUMBER	num	208.9	194.0	211.0	NF
* IDENTIFICATION C - PALMITIC ACID		PASS			NF
* IDENTIFICATION C - STEARIC ACID		PASS			NF
* IODINE VALUE	g I/100g	0.1	0.0	0.5	WM1009
* LOVIBOND (5.25) RED	FL	0.00	0.00	0.10	WM1002
* LOVIBOND (5.25) YELLOW	FL	0.30	0.00	1.00	WM1002
* MELT POINT CLOSED TUBE	Deg C	57.3	56.0	58.0	NF
* ODOR		PASS			OLFACTORY
* ORGANIC VOLATILES		PASS			NF
* RESIDUE ON IGNITION	%	0.0000	0.0000	0.1000	NF
* SAP VALUE	mgKOH/g	209.9	207.0	211.0	FA1007
* TITER	Deg C	55.9	54.50	56.50	FA1005A
* TRANS @ 440 nm	%	98.7	92.0	100.0	FA1023
* TRANS @ 550 nm	%	99.9	98.0	100.0	FA1023
* UNSAPONIFIABLES	%	0.10	0.00	0.20	FA1006
* WATER	%	0.02	0.00	0.20	WM1011

Site of Manufacture: PMC Biogenix, Inc, 1231 Pope Street, Memphis, TN 38108, United States
 SHIP-BM1-776-Template-(BM1) COA Ref : BM1-152712-0

NF designation implies test method conforms to standard practice as defined by current NF at the time of production. Based on knowledge of the manufacturing process and controlled handling, shipping and storage of this material, there is no potential for Residual Solvents defined as Class 1, Class 2, or Class 3, no other organic solvents including but not limited to those listed in <467>, or current edition of the United States Pharmacopoeia at the time of production are used. This material, if tested, will comply with established standards.

Complies with current requirements of the European Directorate for the Quality of Medicines (EDQM), the EMEA and FDA regulations/guidelines for TSE/BSE control. We certify that this material is manufactured from edible sources and is free from the Chick Edema factor.

Jane Parks
 Manager, Lab, Quality Control

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