



Todo Droga

Química Mayorista

CERTIFICATE OF ANALYSIS

DATE : 07/10/2016
ISEGEN REF. : 016890
D / N NO. : 016890
CONTAINER NO. : MSKU2133862
SEAL NO. : ML-ZA4393995
VESSEL : MOL PRESENCE
MANUFACTURING DATE : 01/09/2016
EXPIRY DATE : 01/09/2018 PROVIDED PRODUCT STORED IN DRY, COOL CONDITIONS AND NOT SUBJECT TO PRESSURE

MATERIAL

DL MALIC ACID - FOOD GRADE (Hydroxysuccinic Acid) – 850um

Molecular mass : 134.1 g/mole CAS : 617-48-1

BATCH NO

7160901

QUANTITY

10500 kg

<u>ANALYSIS</u>	<u>METHOD OF ANALYSIS</u>	<u>SPECIFICATION</u>	<u>RESULTS</u>
Appearance	FCC 10	White or nearly white granules	Complies
Identification	FCC 10	To comply with std. scan	Complies
Assay as Malic Acid	FCC 10	NLT 99.0% and NMT 100.5% of $C_4H_6O_5$	99.85
Test for Malate	Isegen Proc. 1.22.11.2.1	Passes test	Passes
Water	Karl Fischer	NMT 0.3% m/m	0.26
Melting Point	Isegen Proc. 1.22.5.2.2	127 → 132 °C	129.2
Fumaric Acid	FCC 10	NMT 1.0% m/m	0.72
Maleic Acid	FCC 10	NMT 0.05% m/m	0.019
Heavy Metals as Pb	FCC 10	NMT 5 mg/kg	<5
Lead	FCC 10	NMT 2 mg/kg	<2
Arsenic	ICP	NMT 1 mg/kg	<1
Mercury	ICP	NMT 0.1 mg/kg	<0.1
Residue on Ignition (Sulphated Ash)	FCC 10	NMT 0.1% m/m	0.035
Water Insoluble Matter	FCC 10	NMT 0.1% m/m	0.034
Readily Oxidisable Substances	Isegen Proc. 1.22.5.2.16	Passes Test – 3 minutes (min)	Complies
Chlorides	Isegen Proc. 1.22.5.2.17	NMT 40 mg/kg	Complies
Specific Rotation $[\alpha]_D^{25}$	FCC 10	- 0.10° and + 0.10°	Complies
Particle Size Distribution	Isegen Proc. 1.22.5.2.14	NLT 98% thru 850 um	99.67
		NMT 5% thru 150 um	0.01

We confirm that this batch complies with FCC 10, E296 and is GMO and Allergen free

QA REPRESENTATIVE