

Certificate of Analysis

Date format	MM/DD/YYYY
Creation date	0
Your order no.	4500567554
Date	0
Delivery note	80788966
Date of dispatch	000030 11/29/2019
Our reference	721459 000030
Date	08/08/2019 101710
Client number	01/03/2020
Date of arrival	

Material / Product / Description

137242 / / L(+)-lactic acid 88% food grade in 25 kg drums

Shipping point

Jungbunzlauer S.A., Z.I. Et Portuaire - B.P. 32, 67390 Marckolsheim

Batch	Quantity	Date of production	Date of expiry	Production plant, country	Country of Origin
5124518	1,600 KG	08/17/2019	08/2022	Marckolsheim, FR	FR

We herewith confirm that this product meets the requirements of Commission Regulation (EU) No 231/2012 and of the latest edition of the Food Chemical Codex (FCC). All analytical methods are in accordance with the latest requirements of the FCC or equivalent methods. Test methods are available on request.

Parameter	Unit	Specification	Value
Assay	%	87.5 - 88.5	87.8
Stereochemical purity (L-isomer)	%	>= 97	conforms*
Colour (fresh)	APHA	<= 50	4
Colour (6 months, 25°C)	APHA	<= 50	conforms*
Identification			conforms
Density (20°C)	g/cm3	1.19 - 1.21	1.21
Sulfated ash	%	<= 0.1	conforms*
Chloride	mg/kg	<= 20	conforms*
Sulphate	mg/kg	<= 20	conforms*
Cyanide	mg/kg	<= 5	conforms*
Iron	mg/kg	<= 10	conforms*
Arsenic	mg/kg	<= 1	conforms*
Lead (Pb)	mg/kg	<= 0.5	conforms*
Mercury	mg/kg	<= 1	conforms*
Heavy Metals (as Pb)	mg/kg	<= 10	conforms*
Calcium	mg/kg	<= 20	conforms*
Citric oxalic phosphoric tartaric acid			conforms*
Readily carbonisable substances			conforms*
Reducing sugars			conforms*

*) Analysis is confirmed based on In-Process-Control or by random testing.

This computer generated certificate is valid without signature.

Quality Control Manager
 Isabelle HABY