

Certificate of Analysis

Creation date 18.04.2019	Your order no. / Date 025097 / 03.04.2019	Delivery note / Date of dispatch 80751432 000050 / 18.04.2019		
Our reference / Date 701227 000050 / 03.04.2019	Client number	Date of arrival 24.04.2019		
Material / Product / Description 137243 / / L(+)-lactic acid 88% heat stable food grade in 25 kg drums		Country of origin: FR		
Shipping point Jungbunzlauer S.A. Z.I. Et Portuaire - B.P. 32 67390 Marckolsheim				
Batch 5121604	Quantity 800 KG	Date of production 15.12.2018	Date of expiry 12.2021	Production plant Marckolsheim, France

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
Identification			conforms
Assay	%	88,0 - 89,0	88,4
Stereochemical purity (L-isomer)	%	>= 97	conforms*
Colour (fresh)	APHA	<= 35	4
Colour (after heating at 200°C, 2H)	APHA	<= 50	17
Density (20°C)	g/cm3	- 1,21	1,21
Sulfated ash	%	<= 0,05	conforms*
Chloride	mg/kg	<= 10	conforms*
Sulphate	mg/kg	<= 10	conforms*
Cyanide	mg/kg	<= 1	conforms*
Iron	mg/kg	<= 5	conforms*
Lead (Pb)	mg/kg	<= 0,5	conforms*
Arsenic	mg/kg	<= 1	conforms*
Mercury	mg/kg	<= 1	conforms*
Heavy Metals (as Pb)	mg/kg	<= 5	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.