

## Certificate of Analysis

**Gracefruit Limited**  
**209 Glasgow Road**  
**Longcroft**  
**Bonnybridge**  
**FK4 1QQ**

Material / Product / Description

137243 / / L(+)-lactic acid 88% heat stable food grade in 25 kg drums

Shipping point

Batch	Quantity	Date of production	Date of expiry	Production plant, country	Country of Origin
5126017	800 KG	02.12.2019	12.2022	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
Identification			conforms
Assay	%	88.0 - 89.0	88.2
Stereochemical purity (L-isomer)	%	>= 97	conforms*
Colour (fresh)	APHA	<= 35	7
Colour (after heating at 200°C, 2H)	APHA	<= 50	22
Density (20°C)	g/cm3	1.19 - 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*