



Version	00
Molecular weight	147.13
Quality Test / Release Date	01/24/2019
Molecular Formula	C <sub>5</sub> H <sub>9</sub> N O <sub>4</sub>
CAS No	6893-26-1
Linear Formula	HO <sub>2</sub> CCH <sub>2</sub> CH <sub>2</sub> CH(NH <sub>2</sub> )CO <sub>2</sub> H
Flash Point (°C)	

## Certificate of Analysis

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Unless otherwise stated, these products are not intended for dialysis, parenteral, or injectable use without further processing. The following are the actual analytical results obtained:

Catalog Number	22789	Quality Test / Release Date	01/24/2019
Lot Number	A0404885		
Description	D(-)-Glutamic acid, 99+%		
Country of Origin	CHINA		
Declaration of Origin	other		

BSE/TSE comment	
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Chemical Comment	
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Result name	Units	Specifications	Test Value
Appearance (Color)		White to off-white	White
Appearance (Form)		Powder	Powder
Infrared spectrum		Conforms	Conforms
Titration with NaOH		99.0 to 101.0 %	99.2 %
Loss on drying		=<0.2 % (105°C, 3 hrs)	0.05 % (105°C, 3 hrs)
Sulfated ash		=<0.1 %	0.08 %
Other amino acids		=<0.5 % (TLC)	=<0.5 % (TLC)
Specific optical rotation		-30.5° to -32.2° (20°C, 589 nm) (c=10, 2 N HCl)	-31.7° (20°C, 589 nm) (c=10, 2 N HCl)
HPLC		=<1 % L-content	=<1 % L-content



A handwritten signature in black ink, appearing to read "L. Van den Broek".

L. Van den Broek, QA Manager

Issued: 01-25-2019

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