

# **Kalchem International**

## **Chemicals & Compounding Supplies**

### **Certificate of Analysis**

#### **L-METHIONINE USP/FCC/EP**

**Customer Po:** KT081815  
**Product No:** 131402-C  
**CAS No:** 63-68-3  
**Lot No:** 8716040502  
**Manufacture Date:** 05/14/2014  
**Expiration Date:** 05/13/2018

<b>Tests</b>	<b>Unit</b>	<b>Specification</b>	<b>Result</b>	<b>Test Method</b>
Identification		Pass	Pass	FT-IR
pH		5.600-6.100	5.700	2.5% water, 25°C
Assay	%	99.000-101.000	100.100	USP-FCC-EP-JP
Specific Rotation @ 20°C (+)	deg	22.500-24.000	23.000	FCC-EP-JP
Specific Rotation @ 25°C (+)	deg	22.400-24.700	23.100	USP-FCC
Transmittance	%	> =95.00	99.60	EP-JP
Loss on Drying	%	< =0.20	0.02	USP-FCC-EP-JP
Residue on Ignition	%	< =0.10	0.04	USP-FCC-EP-JP
Ammonium	ppm	< =200.00	< 200.00	EP-JP
Chloride	ppm	< =200.00	< 200.00	USP-EP-JP
Sulfate	ppm	< =200.00	< 200.00	USP-EP-JP
Heavy metals (as Pb)	ppm	< =5.00	< 5.00	USP-FCC-EP
Arsenic	ppm	< =2.00	< 0.20	JP
Iron	ppm	< =10.00	< 10.00	USP-EP
Other Amino Acids	%	< =0.50	< 0.50	USP-EP-JP
Residual Solvent		Pass	Pass	USP-EP

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