



**RE: Residual Solvents - Naloxone Hydrochloride, Dihydrate, USP (Cat# N1231)**

To Whom It May Concern:

Thank you for your interest in Spectrum high quality chemicals.

The above mentioned catalog item complies with the requirements of USP <467> Residual Solvents and ICH Q3C Residual Solvents Guideline. The following solvents are likely to be present:

Residual Solvent	Class	Expected Concentration
Acetonitrile	2	< 410 ppm
<i>N,N</i> -Dimethylacetamide	2	< 1090 ppm
Acetone	3	< 5000 ppm
1-Butanol	3	< 5000 ppm
Ethanol	3	< 5000 ppm
Isobutyl Acetate	3	< 5000 ppm
1-Propanol	3	< 5000 ppm
2-Propanol	3	< 5000 ppm

No Class 1 or other solvents are used or produced in the manufacturing process of this material.

For lot-specific information, please refer to the respective Certificate of Analysis.

If you have any further questions, please contact us by telephone at 1(800)772-8786 Option 2, or by email at [TechServices@spectrumchemical.com](mailto:TechServices@spectrumchemical.com).

Sincerely,

Technical Services  
Spectrum Chemical Mfg. Corp.

This document has been produced electronically and is valid without a signature.

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