

Fisher Chemical Solvents for GC Headspace

High purity solvents for accurate and reliable analysis of organic volatile impurities (OVIs) by gas chromatography headspace (GC-HS)

The determination of residual solvents (organic volatile impurities) by GC headspace is an important quality control procedure in the pharmaceutical industry. Residual solvent testing is defined in accordance with the ICH¹ and required by USP and Ph. Eur. The technique requires extraction of residual solvents from the sample using a high purity solvent free of contaminants that could interfere with GC analysis by co-eluting with the peaks of interest. ICH guidelines include maximum concentration limits for Class 1, Class 2, and Class 3 residual solvents (most to least toxic, respectively). Fisher Chemical's GC Headspace solvents are performance tested to ensure absence of trace level ICH residual solvents.

Key Features of Fisher Chemical GC Headspace Solvents

Residual Solvent Class	GC Headspace Solvent Suitability Specification	ICH Residual Solvent Concentration Limit
1	1 ppm max.	2 ppm (Benzene)
2	10 ppm max.	50 ppm (Methylbutyl-ketone)
3	50 ppm max.	NA



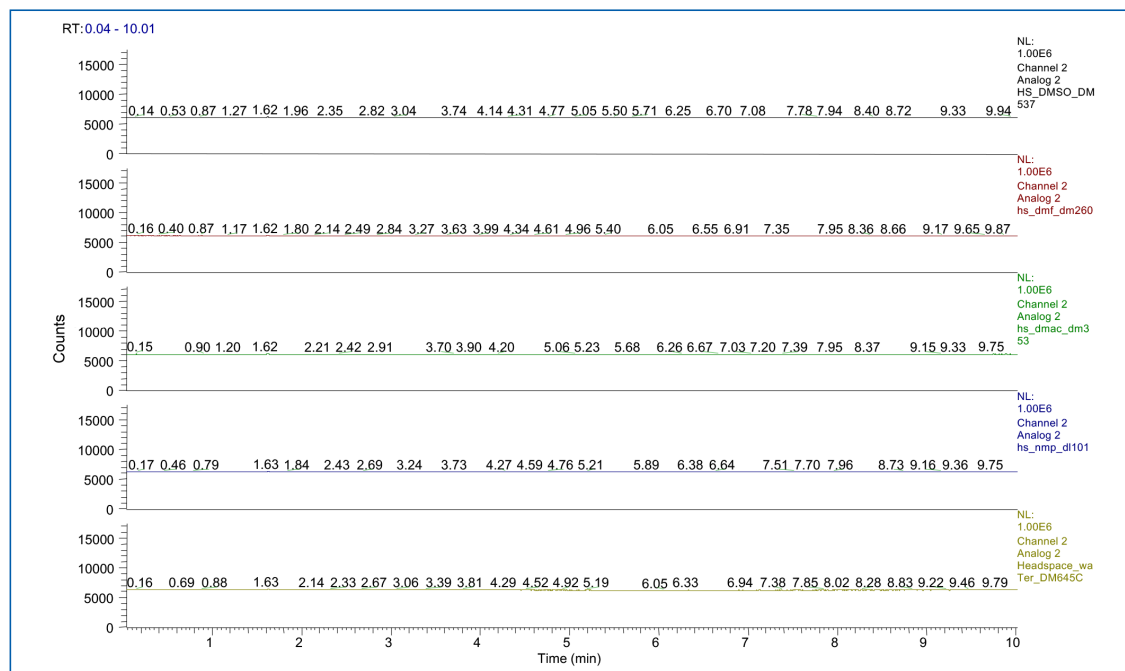
- Processed to high purity for **accurate and repeatable determination of trace levels of Class 1, Class 2, and Class 3 residual solvents in pharmaceuticals**
- Tested by UV absorbance to **ensure low organic contamination**
- Processed for low water content to **facilitate the extraction of organic volatile impurities**
- Packaged in an inert atmosphere to **maximize shelf life in unopened containers**

¹International Conference of Harmonization

Part No	Product Description	Pack Size
W10-1	Water, GC Headspace	1L
D139-1	DMSO, Dimethyl Sulfoxide, GC Headspace	1L
D133-1	DMF, N,N-Dimethylformamide, GC Headspace	1L
D160-1	DMAC, N,N-Dimethylacetamide, GC Headspace	1L
N140-1	NMP, N-Methyl-2-Pyrrolidone, GC Headspace	1L

Blank run of solvents

No impurity peaks before the main solvent peak (0–10 minutes)



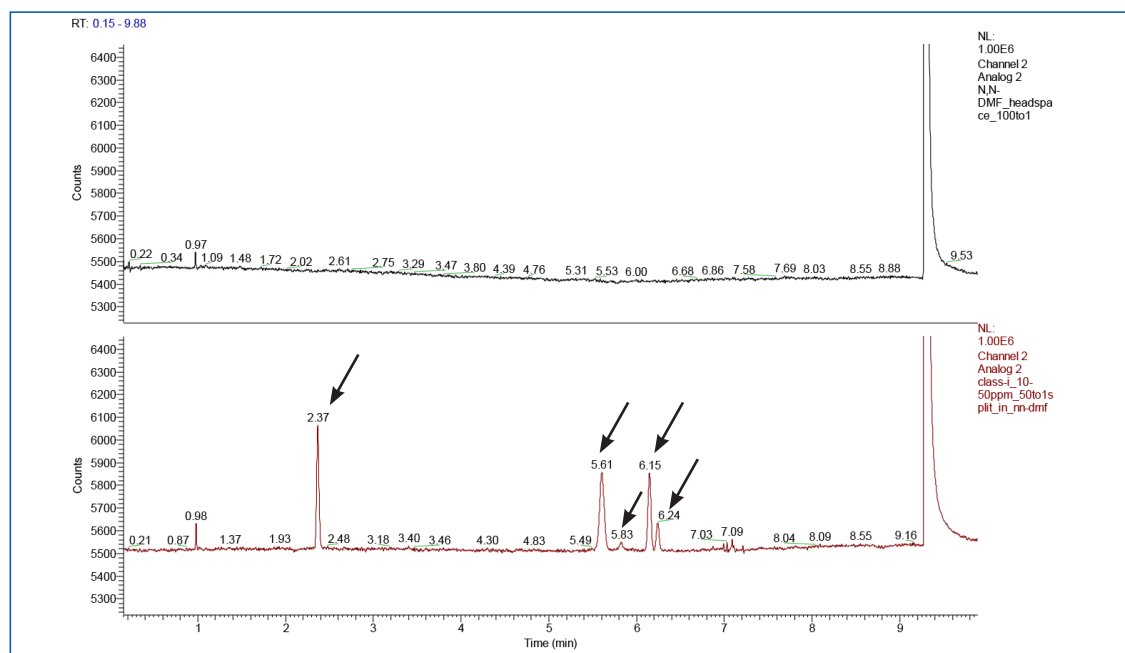
DMSO

DMF

DMAC

NMP

Water



NMP – Blank

Class 1
Standard Mix
in NMP

Peaks:

2.37 min – 1,1-Dichloroethene

5.83 min – Carbon tetrachloride

6.24 min – 1,2-Dichloroethane

5.61 min – 1,1,1-Trichloroethane

6.15 min – Benzene

To place an order, contact your local Fisher Scientific office.

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