

ANALYSIS CERTIFICATE

CODE: 191954

BATCH: 0001978490

PRODUCT: Dimethyl Sulfoxide (USP, BP, Ph. Eur.) pharma grade

ISSUE DATE: 16/03/2021

RETEST DATE: 03/2027

SPECIFICATIONS	GUARANTEE VALUE	ACTUAL VALUE
Minimum assay (G.C.)	99,9%	99,9%
Identity according to Pharmacopoeias:	passes test	passes test
	IR passes test	IR passes test
Density 25/25	1,095-1,101	1,098
Density 20/20	1,100-1,104	1,103
Freezing point	$\geq 18,3^{\circ}\text{C}$	18,5°C
Refractive index n 20/D	1,478-1,480	1,4784
Refractive index n 25/D	1,4755-1,4775	1,4772
Maximum limit of impurities		
Acidity	passes test	passes test
Non-volatile matter	0,01 %	<0,01 %
Absorbance (UV):		
Related substances USP (G.C.)	0,1 %	<0,1 %
Substances darkened by KOH	passes test	passes test
Residual solvents (Ph.Eur/USP)	passes test	passes test
ABS 270 - 350 nm	passes test	passes test
No maximum absorption		
ABS at 275 nm	0,20	<0,20
ABS at 285 nm	0,20	<0,20
ABS at 295 nm	0,20	<0,20
Relationship A285/A275	0,65	<0,65
Relationship A295/A275	0,45	<0,45
Related substances Ph.Eur. (G.C.)		
Individual	0,10%	<0,10%
Total	0,15%	<0,15%
Dimethyl Sulfone (G.C.)	0,03%	<0,03%
Water (H <sub>2</sub> O)	0,1 %	0,04 %
Elemental impurities (ICH Q3D):		
Class 1		
Cd	0,5 ppm	<0,5 ppm
Pb	0,5 ppm	<0,5 ppm
As	1,5 ppm	<1,5 ppm
Hg	1,5 ppm	<1,5 ppm
Class 2A		
Co	5 ppm	<5 ppm
V	10 ppm	<10 ppm
Ni	20 ppm	<20 ppm
Class 2B		
Tl	0,8 ppm	<0,8 ppm
Au	10 ppm	<10 ppm
Pd	10 ppm	<10 ppm
Ir	10 ppm	<10 ppm
Os	10 ppm	<10 ppm
Rh	10 ppm	<10 ppm
Ru	10 ppm	<10 ppm
Se	15 ppm	<15 ppm
Ag	15 ppm	<15 ppm
Pt	10 ppm	<10 ppm
Class 3		
Li	55 ppm	<55 ppm
Sb	120 ppm	<120 ppm
Ba	140 ppm	<140 ppm
Mo	25 ppm	<25 ppm
Cu	250 ppm	<250 ppm
Sn	600 ppm	<600 ppm
Cr	25 ppm	<25 ppm

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