

## Certificate of Analysis

<b>Product</b>	Propan-2-ol	<b>Batch No.</b>	: 19 07 0246
<b>Grade</b>	Extropure-MS	<b>Manufacturing date</b>	: 06/08/2019
<b>Code No.</b>	XP1292	<b>Best before</b>	: 07/2023

Items	Descriptions	Specifications	Test Results
1	Assay (by GC.)	99.9% min.	99.9%
2	Color (APHA)	10 max.	< 10
3	Water (by Coulometry)	0.05% max.	0.022%
4	Acidity ( $\mu$ Eq./g.)	0.2 max.	< 0.2
5	Alkalinity ( $\mu$ Eq./g.)	0.1 max.	< 0.1
6	Solubility in water	Passes test	Passes test
7	Residue on Evaporation	3 ppm max.	1.2 ppm
8	Chloride (Cl)	0.2 ppm max.	< 0.2 ppm
9	Phosphate (PO <sub>4</sub> )	0.5 ppm max.	< 0.5 ppm
10	Heavy metals (as Pb)	200 ppb max.	< 200 ppb
11	Aluminium (Al)	50 ppb max.	< 50 ppb
12	Arsenic and Antimony (as As)	10 ppb max.	< 10 ppb
13	Barium (Ba)	20 ppb max.	< 20 ppb
14	Boron (B)	10 ppb max.	< 10 ppb
15	Cadmium (Cd)	20 ppb max.	< 20 ppb
16	Calcium (Ca)	50 ppb max.	< 50 ppb
17	Chromium (Cr)	20 ppb max.	< 20 ppb
18	Cobalt (Co)	20 ppb max.	< 20 ppb
19	Copper (Cu)	10 ppb max.	< 10 ppb
20	Gallium (Ga)	30 ppb max.	< 30 ppb
21	Germanium (Ge)	30 ppb max.	< 30 ppb
22	Gold (Au)	20 ppb max.	< 20 ppb
23	Iron (Fe)	50 ppb max.	< 50 ppb
24	Lead (Pb)	20 ppb max.	< 20 ppb
25	Lithium (Li)	50 ppb max.	< 50 ppb
26	Magnesium (Mg)	20 ppb max.	< 20 ppb
27	Manganese (Mn)	20 ppb max.	< 20 ppb
28	Nickel (Ni)	10 ppb max.	< 10 ppb
29	Potassium (K)	100 ppb max.	< 100 ppb
30	Silicon (Si)	50 ppb max.	< 50 ppb
31	Silver (Ag)	20 ppb max.	< 20 ppb
32	Sodium (Na)	100 ppb max.	< 100 ppb
33	Strontium (Sr)	20 ppb max.	< 20 ppb
34	Tin (Sn)	100 ppb max.	< 100 ppb
35	Titanium (Ti)	20 ppb max.	< 20 ppb
36	Zinc (Zn)	50 ppb max.	< 50 ppb
37	Hydrocarbons Content	Passes test	Passes test
38	Silicone oil	Free	Not detectable
39	DOP	Free	Not detectable
40	Amide	Free	Not detectable
41	Particle/ml :		
	0.5 $\mu$ m and greater	50 max.	8
	1.0 $\mu$ m and greater	8 max.	1

This is to certify the above batch has been tested and complies with this specification.

Ladaphan

Chemist

Achun

Technical Manager