

**Scharlab S.L.**

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**CERTIFICATE OF ANALYSIS**

Product: **Methanol**, Multisolvant<sup>®</sup> HPLC grade ACS ISO  
**ME0315** UV-VIS K.F.

Batch 17371307  
Quality release date 04/08/2016  
Expiry date 8/2021

| Analysis                    | Batch value   | Specifications    |
|-----------------------------|---------------|-------------------|
| assay (G.C.)                | 99,99 %       | min. 99,9 %       |
| identity (IR-spectrum)      | passes test   | passes test       |
| density (20°/4°)            | 0,7914        | 0,790 - 0,792     |
| appearance                  | clear         | clear             |
| colour (Hazen)              | < 10          | max. 10           |
| solubility in water         | passes test   | passes test       |
| acidity                     | 0,00006 meq/g | max. 0,0002 meq/g |
| alkalinity                  | 0,00009 meq/g | max. 0,0002 meq/g |
| chlorides (Cl)              | < 0,00005 %   | max. 0,00005 %    |
| sulfates (SO <sub>4</sub> ) | < 0,0001 %    | max. 0,0001 %     |
| aluminium (Al)              | < 0,00001 %   | max. 0,00001 %    |
| arsenic (As)                | < 0,000002 %  | max. 0,000002 %   |
| barium (Ba)                 | < 0,000001 %  | max. 0,000001 %   |
| beryllium (Be)              | < 0,000002 %  | max. 0,000002 %   |
| bismuth (Bi)                | < 0,000002 %  | max. 0,000002 %   |
| boron (B)                   | < 0,000002 %  | max. 0,000002 %   |
| cadmium (Cd)                | < 0,000001 %  | max. 0,000001 %   |
| calcium (Ca)                | < 0,00003 %   | max. 0,00003 %    |
| chromium (Cr)               | < 0,000002 %  | max. 0,000002 %   |
| cobalt (Co)                 | < 0,000002 %  | max. 0,000002 %   |
| copper (Cu)                 | < 0,000002 %  | max. 0,000002 %   |
| gallium (Ga)                | < 0,000002 %  | max. 0,000002 %   |
| gold (Au)                   | < 0,000002 %  | max. 0,000002 %   |
| indium (In)                 | < 0,000002 %  | max. 0,000002 %   |
| iron (Fe)                   | < 0,000002 %  | max. 0,000002 %   |
| lead (Pb)                   | < 0,00001 %   | max. 0,00001 %    |
| lithium (Li)                | < 0,000005 %  | max. 0,000005 %   |
| magnesium (Mg)              | < 0,00001 %   | max. 0,00001 %    |
| manganese (Mn)              | < 0,000001 %  | max. 0,000001 %   |
| molybdenum (Mo)             | < 0,000002 %  | max. 0,000002 %   |
| nickel (Ni)                 | < 0,000002 %  | max. 0,000002 %   |
| platinum (Pt)               | < 0,000005 %  | max. 0,000005 %   |
| silver (Ag)                 | < 0,000002 %  | max. 0,000002 %   |
| thallium (Tl)               | < 0,000002 %  | max. 0,000002 %   |
| tin (Sn)                    | < 0,00001 %   | max. 0,00001 %    |

This certificate does not release the user from their control upon receipt of the goods  
You can get a copy of any of our COA from our web site: [www.scharlab.com](http://www.scharlab.com)

M. Canet  
Laboratory Manager

## Scharlab S.L. - Certificate of Analysis

**Product name:** Methanol, Multisolvant<sup>®</sup> HPLC grade ACS ISO UV-VIS K.F.

**Batch:** 17371307

**Product code:** ME0315

| Analysis                                                     | Batch value  | Specifications  |
|--------------------------------------------------------------|--------------|-----------------|
| titanium (Ti)                                                | < 0,000002 % | max. 0,000002 % |
| vanadium (V)                                                 | < 0,000002 % | max. 0,000002 % |
| zinc (Zn)                                                    | < 0,000001 % | max. 0,000001 % |
| zirconium (Zr)                                               | < 0,000002 % | max. 0,000002 % |
| acetone (G.C.)                                               | < 0,0001 %   | max. 0,001 %    |
| ethanol (G.C.)                                               | 0,0020 %     | max. 0,05 %     |
| aldehydes and ketones (as C <sub>2</sub> H <sub>5</sub> CHO) | < 0,001 %    | max. 0,001 %    |
| acetaldehyde (CH <sub>3</sub> CHO)                           | < 0,001 %    | max. 0,001 %    |
| formaldehyde                                                 | < 0,0001 %   | max. 0,0001 %   |
| carbonyl compounds (as CO)                                   | < 0,001 %    | max. 0,001 %    |
| substances darkened by H <sub>2</sub> SO <sub>4</sub>        | passes test  | passes test     |
| substances reducing KMnO <sub>4</sub>                        | passes test  | passes test     |
| residue on evaporation                                       | 0,0002 %     | max. 0,0002 %   |
| water (K.F.)                                                 | 0,0148 %     | max. 0,03 %     |

### liquid chromatography suitability

|            |             |             |
|------------|-------------|-------------|
| absorbance | passes test | passes test |
|------------|-------------|-------------|

min. transmission/max. absorbance

in a 1,0 cm cell at

| wavelength: | T(%) A (AU)   | T(%) A (AU)   |
|-------------|---------------|---------------|
| 207 nm      | 10 % 1,000 AU | 10 % 1,000 AU |
| 220 nm      | 50 % 0,301 AU | 50 % 0,301 AU |
| 232 nm      | 80 % 0,097 AU | 80 % 0,097 AU |
| 242 nm      | 90 % 0,046 AU | 90 % 0,046 AU |
| 260 nm      | 98 % 0,009 AU | 98 % 0,009 AU |

### Microfiltered through membranes

of pore diameter 0,22 µm

