



## EN 15376:2014 (E) EUROPEAN FUEL ETHANOL SPECIFICATION

### 4.4 Generally applicable requirements and related test methods

4.4.1 When tested by the methods indicated in Table 1, ethanol before denaturing shall be in accordance with the limits specified in Table 1.

**Table 1 – Generally applicable requirements and test methods for undenatured ethanol**

Property	Unit	Limits		Test Method <sup>a</sup>
		Minimum	Maximum	(See Clause 2)
Ethanol + higher saturated alcohols content	% (m/m)	98,7		EN 15721 <sup>b</sup>
Higher saturated (C3-C5) mono-alcohols content <sup>c</sup>	% (m/m)		2,0	EN 15721 <sup>b</sup>
Methanol content	% (m/m)		1,0	EN 15721 <sup>b</sup>
Water content <sup>d</sup>	% (m/m)		0,300	EN 15489 EN15692
Total acidity (expressed as acetic acid)	% (m/m)		0,007	EN 15491
Electrical conductivity <sup>e</sup>	μS/cm		2,5	EN 15938
Appearance		Clear and colourless		EN 15769
Inorganic chloride content	mg/kg		1,5	EN 15492
Sulfate content	mg/kg		3,0	EN 15492
Copper content <sup>f</sup>	mg/kg		0,100	EN 15488 EN 15837
Phosphorus content <sup>g</sup>	mg/l		0,15	EN 15487 EN 15837
Involatile material content	mg/100ml		10	EN 15691
Sulfur content	mg/kg		10,0	EN 15485 EN 15486 EN 15837

a (4.6.1) All test methods referred to in this European Standard include a precision statement according to EN ISO 4259.

In cases of dispute, the procedures for resolving the dispute and interpretation of the results based on test method precision, described in EN ISO 4259, shall be used.

b The result of this test method refers to the water free sample.

c Higher saturated alcohols have the chemical formula  $C_nH_{2n+1}OH$ , where n is 3, 4 or 5.

d (4.6.2) In cases of dispute concerning water content, EN 15489 shall be used.

e To be measured prior to additivation.

f (4.6.3) In cases of dispute concerning copper or sulfur content, EN 15837 shall be used.

g (4.6.4) In cases of dispute concerning phosphorus content, EN 15487 shall be used.