

## Iso Amyl alcohol content in ethanol

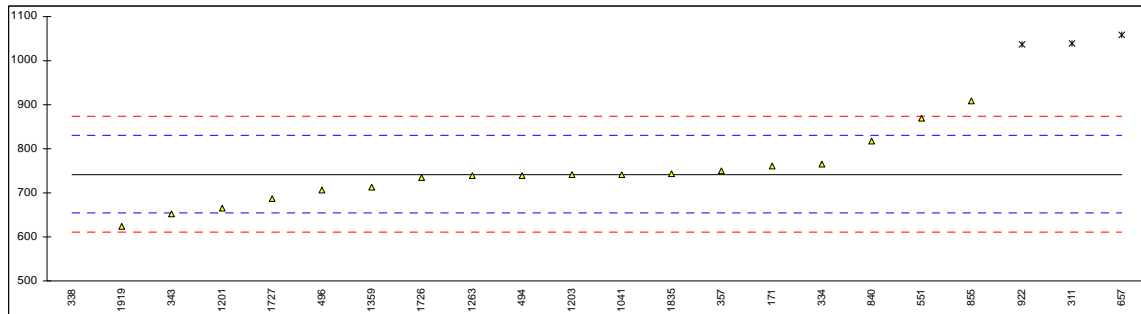
After the issue of the final report iis10C12a on Fuel/Bio-ethanol one of the participating laboratories did send us an e-mail on the evaluation of iso amylalcohol in February 2011.

This participating laboratory had determined the iso amylalcohol content by an 'in-house' test method and detected 743 mg/kg iso amyl alcohol (3-methyl-1-butanol) in the PT sample #1090, but also 253 mg/kg of 2-methyl-1-butanol (also known as active amyl alcohol). As this last component was not explicitly requested to be reported, a number of test results in the final report may be the sum of 2- and 3-methyl-1-butanol. Therefore an investigation was started and a number of participating laboratories was contacted to ask whether the reported test result was from 3-methyl-1-butanol or from the sum of 2- and 3-methyl-1-butanol.

In EN 15721 the separation between 2- and 3-methyl-1-butanol is used to check the chromatographic resolution. The column resolution should be at least 1.0. And it appeared that all seven laboratories that used EN15721 as test method correctly reported 3-methyl-1-butanol only.

Also it became certain that the six highest test results were all representing the sum of 2- and 3-methyl-1-butanol. Regretfully some of those were incorrectly summed by iis, while being reported correctly by the laboratories.

From the above results was concluded that the assigned value for iso amyl alcohol as reported in our report iis10C12a of February 2011 indeed was incorrect. The correct iso amyl alcohol content of sample #1090 will be much less than as reported in the final report, see below summary statistics. The full corrected evaluation can be found on the iis website <http://www.iisnl.com>.



normality	not OK
n	18
outliers	1
mean (n)	742.20
st.dev. (n)	70.269
R(calc.)	196.75
R(Horwitz)	122.95