RESOLUTION OENO 12/2007

AMENDMENT TO RESOLUTION OENO 22/2003 – LIMIT OF DETECTION AND LIMIT OF QUANTIFICATION

THE GENERAL ASSEMBLY

CONSIDERING Article 2 paragraph 2 iv of the Agreement of April 3, 2001 establishing the International Organisation of Vine and Wine,

On proposal of the Sub-commission of "Methods of Analysis",

CONSIDERING Resolution OENO 22/2003

DECIDES to complete in the Compendium on International Methods of Analysis of Wine and Musts, the Resolution OENO 22/2003 by:

- Adding the following Point 7
- Renumber the current Point 7 by Point 8

7. LIMIT OF DETECTION AND LIMIT OF QUANTIFICATION

The limit of detection (LD) and the limit of quantification (LQ) are estimated following the instructions in the resolution OENO 7-2000 "Estimation of the Detection and Quantification Limits of a Method of Analysis". Along the line of the "Logic Diagram for Decision-Making" in N° 3 the graph approach has to be applied following paragraph 4.2.2.

For this purpose a part of the chromatogram is drawn out extendedly enclosing a range of a tenfold mid-height width (w½) from an anthocyan relevant peak.

Furthermore two parallel lines are drawn which just enclose the maximum amplitude of the signal window. The distance of these two lines gives hmax, expressed in milli Absorption Units (mAU).

The limit of detection (LD) and the limit of quantification (LQ) depend on the individual measurement conditions of the chemical analysis and are to be determined by the user of the method. The Annex gives an example of its determination with the following results:

h_{max}= 0,208 [mAU]; LD = 3 x 0,208 [mAU] = 0,62 [mAU].

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LQ = 10 x 0, 208 [mAu] = 2,08 [mAU].

Recommendation:

With combined data out of the whole Anthocyanin composition such as the sum of Acylated Anthocyanins or the ratio of Acetylated to Coumarylated Anthocyanins the calculation should not be carried out in cases where one of the components is below the limit of quantification (LQ).

On the other hand measurements below the limit of quantification (LQ) are not devoid of information content and may well be fit for purpose [1].

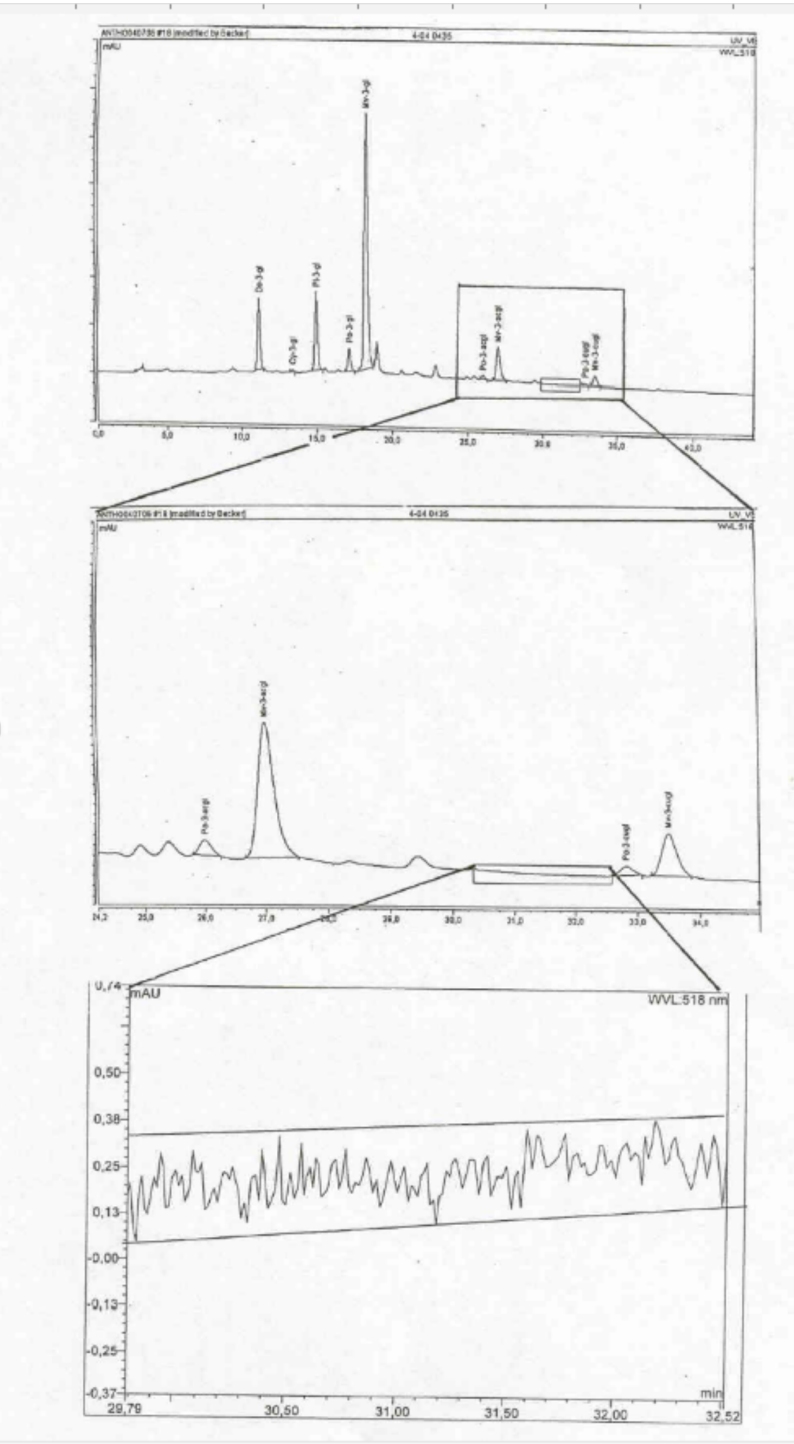
Bibliography:

1. Thompson, M.; Ellison, S.L.R. ; Wood, R., Harmonized Guidelines for Single-Laboratory Validation of Methods of Analysis, Pure Appl. Chem. (2002) 74: 835- 855

Annex 1

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