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# COMPARISON BETWEEN TWO SOLVENT MIXTURES FOR DETERMINATION OF PEROXIDE VALUE FROM ANHYDROUS MILK FAT

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**Key words***:* peroxide value, methanol/1-decanol/n-hexane mixture, chloroform/methanol mixture

SUMMARY

The protocol for the determination of the peroxide value of anhydrous milk fat was according to ISO 3976 | IDF 74:2006. This edition cancels and replaces IDF 74A:1991, which has been technically revised by using a new reagent (methanol/1-decanol/n-hexane mixture), in ratio 3:2:1 (v/v) for ecological reasons. The mixture of solvent used in previous standard was chloroform/methanol in ratio 7:3 (v/v). For comparison between both solvent mixtures, we prepared the 2 calibration curves.

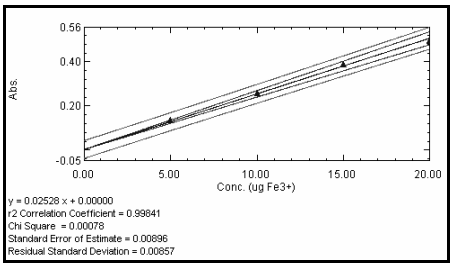


*Fig. 1 Calibration curve of chloroform: methanol mixture (CM)*

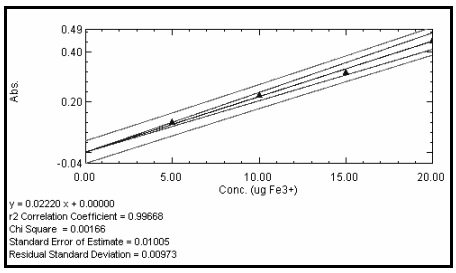


*Fig.2 Calibration curve ofmethanol/1-decanol/n-hexane mixture (MDH)*

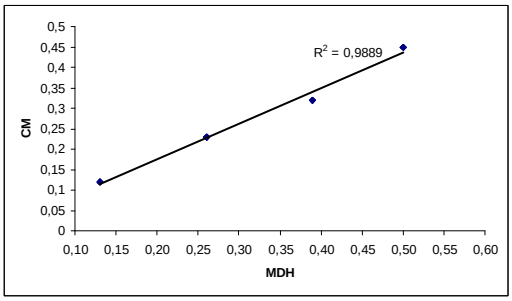


*Fig.3 Correlation between the absorbance values obtained by using methanol/1-decanol/n-hexane (MDH) and chloroform/methanol mixture (CM)*

Figure 3 shows the positive correlation between absorbance values obtained by using MDH and CM mixtures. The coefficient of determination ($R^2$) for this relation was $R^2 = 0.9889$. In conclusion, both solvents have similar results and can be used preferential for peroxide value determination.

BIBLIOGRAPHY

ISO 3976 | IDF 74:2006, Milk fat –determination of peroxide value