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

Semeniuc Cristina

Agricultural University and Veterinary Medicine Cluj-Napoca, Department of Food Science and Technology
cristinasemeniuc@yahoo.com

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.

Figure 3 shows the positive correlation between absorbance values obtained by using MDH and CM mixtures. The coefficient of determination (R²) for this relation was R² = 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