

6.9 WALTER HEIN, FRIEDRICH EMERSTORFER

Zuckerforschung Tulln GmbH, Josef-Reither-Str. 21-23, A – 3430 Tulln

**EVALUATION OF THE REFRACTOMETRIC FORMULA FOR THE
PREDICTION OF THE TECHNOLOGICAL QUALITY
OF STORED SUGAR BEETS**

**Evaluation de la formule du réfractomètre pour pronostiquer la qualité
technique de betteraves sucrières stockées / Evaluation der Refraktometer-
Formel zur Vorhersage der technischen Qualität gelagerter Zuckerrüben**

ABSTRACT

In a comparative study with different predictive models for the technological beet quality it could be demonstrated that the so-called refractometric formula reacts to decreasing beet quality during storage as it is known for formulas, which take into account invert sugar but are much more labor intensive and time consuming. Consequently, further investigations were carried out in this direction.

These investigations were carried out with beet material from storage trials from a practice variety trial as well as from weekly blended samples collected throughout the campaign. Basically, previous results could be confirmed. Only for storage variants, which were kept under extreme storage conditions, the calculated values were better than those from the laboratory procedure. The data was also used to verify the factors for the formula, whereas the factors which were calculated from trials in 2011/12 were relatively stable. Another key aspect was the validation of the refractometric determination of the dry substance in the beet digerate under beet laboratory conditions. After the installation of automated cleaning and calibration cycles the needed precision could be achieved.
