

ASBC Approved Methods Cereals – 5B

B. Enzyme conversion method for corn grits (International Method)
Calculate % extract in corn grits (GE) by the formulas,

$$\text{GE, as-is, \%} = \left\{ \frac{[\text{PG}(830 + 0.7M - 2D)]}{100 - \text{PG}} - \text{EE} \right\} \times \frac{100}{70}$$

$$\text{GE, dry basis, \%} = \frac{\text{GE, as is} \times 100}{100 - M}$$

Cereals – Enzyme Conversion Method

D = g of enzyme reagents mixture used

PE = g extract in 100 g enzyme blank filtrate (°Plato)

Result: $\text{EE} = \frac{\text{PE}(900 - 2D)}{100 - \text{PE}}$

PG = g extract in 100 g grits mash filtrate (°Plato)

M = % moisture in grits sample

Results

Extract in corn grits sample, %, as-is

Extract in corn grits sample, dry basis

Extract in corn grits sample, as-is basis,

$$\begin{aligned} \text{GE, as-is} &= \left\langle \frac{\{7.973 \times [830 + (0.7 \times 8.4) - (2 \times 3.0)]\}}{100 - 7.973} - 11.85 \right\rangle \times \frac{100}{70} \\ &= 85.8\% \end{aligned}$$

Extract in corn grits sample, dry basis,

$$\text{GE, dry basis} = \frac{85.8 \times 100}{100 - 8.4} = 93.7\%$$