Alkoholmessung mit dem Refraktometer

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Einleitung

[12] [7] [6] [1] [2] [3] [4] [5] [13] [11] [9] [10] [8] [14]

Bonham: Standard Formel (2001)

$$FG = 1.001843 - 0.002318474 Rc_i - 0.000007775 Rc_i^2 - 0.000000034 Rc_i^3 + 0.00574 R_f + 0.00003344 R_f^2 + 0.000000 \tag{1}$$

$$AE = 1.53 R_f - 0.59 Rc_i \tag{2}$$

Terrill (2011)

$$FG = 1 - 0.000856829 Rc_i + 0.00349412 Rc_f \tag{3}$$

$$FG = 1 - 0.0044993 Rc_i + 0.000275806 Rc_i^2 - 0.00000727999 Rc_i^3 + 0.0117741 Rc_f - 0.00127169 Rc_f^2 + 0.000063292 \tag{4}$$

Gossett (2012)

$$k = 0.445 \tag{5}$$

$$c = 100\frac{R_i - R_f}{100 - 48.4k - 0.582R_f} \tag{6}$$

$$ABW = \frac{48.4c}{100 - 0.582c} \tag{7}$$

Novotný (2017)

$$FG = -0.002349Rc_i + 0.006276Rc_f + 1 \tag{8}$$

$$FG = 1.335{\cdot}10^{-5}Rc_i^2 - 3.239{\cdot}10^{5}Rc_iRc_f + 2.916{\cdot}10^{-5}Rc_f^2 - 2.421{\cdot}10^{-3}Rc_i + 6.219{\cdot}10^{-3}Rc_f + 1 \tag{9}$$

$$ABW = 0.67062Rc_i - 0.66091Rc_f \tag{10}$$

$$RE = -0.29388Rc_i + 1.27582Rc_f \tag{11}$$

Gleichung 8

Quellen

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