

Beispiel:

$V_{\text{O}_2} = 15,1 \text{ l/min}$
 $V_{\text{CO}_2} = 48,1 \text{ l/min}$
 $m(H_2O) = 45,1 \text{ g/min}$
 $O_2 = 2,483$
 Wassergehalt u. Sauerstoffgehalt
 Osmolarität

Die Osmolarität bestimmt, wie
 viele osmotisch aktive Teilchen
 in einer Lösung vorhanden sind.
 (z.B. 1 Mol NaCl liefert 2 Osmolen)



$n(CO_2) = \frac{48,1 \text{ l/min}}{22,4 \text{ l/mol}} = 2,15 \text{ mol/min}$
 $\frac{1}{CO_2} \Rightarrow \frac{1}{C} \cdot x = n(C) = \frac{3,5}{x} \cdot x = 3,5$
 $m(C) = 95,12 \cdot 0,01 \text{ mol} = 0,9512 \text{ mol}$

$n(H_2O) = \frac{45,1 \text{ g/min}}{18 \text{ g/mol}} = 2,51 \text{ mol/min}$
 $\frac{1}{H_2O} \Rightarrow \frac{1}{C} \cdot x = n(H_2O) = \frac{1}{x} \cdot x = 1$
 $x = 1,2 \cdot 1 = 1,2$

$V_{\text{O}_2} = 15,1 \text{ l/min} = 15,1 \text{ dm}^3/\text{min}$
 $m_{\text{O}_2} = \frac{V}{V_m} = \frac{15,1 \text{ dm}^3}{22,4 \text{ dm}^3/\text{mol}} = 0,674 \text{ mol/min}$
 $m_{\text{O}_2} \cdot M_r = n \cdot M_r$

$$D_{01} = \frac{W_{\text{oprem}} \cdot f_{01}}{W_{\text{regr}}}$$

$$D_{01} = 4,983$$

$$W_{\text{oprem}} \cdot f_{01} = D_{01} \cdot W_{\text{regr}} = 2,483029 \cdot 421 / \text{uone} = 1045,06$$

$$f_{01} = W_{\text{oprem}} \cdot f_{01} \cdot W_{\text{regr}} = 1045,06$$

$$m(0) = 48,441 - (42,035 + 18,14) = 48,441 - 60,175 = -11,734$$

~~Handwritten scribbles and crossed-out text.~~

$$x:y = 4(C):n(H) = \frac{4,05}{4,9} : \frac{1}{8,4} = 2,19:8,4$$

$$x:y = \frac{3,49}{3,49} : \frac{1,49}{1,49} = 1:1,49$$

$$H = 1,49$$

Handwritten notes and calculations at the top of the page, including a circled '42'.