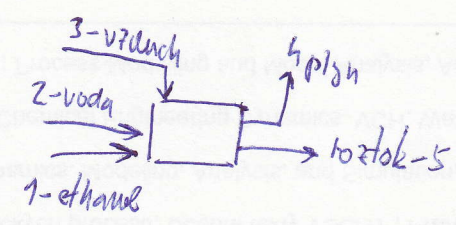
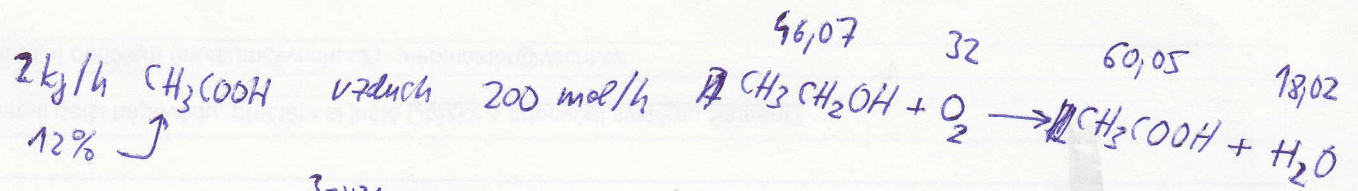


U2-16



	W					
A - ethanol	1	-	-	-	-	$\Rightarrow 0$
B - O <sub>2</sub>	-	-	0,233	W <sub>B4</sub>	W <sub>A5</sub>	
C - octová	-	-	-	-	-	0,12
D - voda	-	1	-	-	-	W <sub>D5</sub>
E - N <sub>2</sub>	-	-	0,767	W <sub>E4</sub>	-	
	m <sub>1</sub>	m <sub>2</sub>	5,768	m <sub>4</sub>	m <sub>5</sub>	

8+1 neznámých  
 5 rovnic  
 2x E  
 1x pořadovaný vstřezek

$m_5 \cdot 0,12 = 2 \text{ kg/h}$   
 $m_5 = 16,67 \text{ kg/h}$

$\bar{M}_3 = 0,21 \cdot 32 + 0,79 \cdot 28 = 28,84 \frac{\text{kg}}{\text{kmol}}$

$m_2 = \bar{M}_2 \cdot m_2 = 28,84 \cdot 0,2 = 5,768 \text{ kg}$   
 $\frac{\text{kg}}{\text{kmol}} \quad \text{kmol}$

$m_1 = \xi \cdot 46,07 \Rightarrow m_1 = 1,534 \text{ kg/h}$

$5,768 \cdot 0,233 = m_4 W_{B4} + \xi \cdot 32 \quad (\times)$

$\xi \cdot 60,05 = 0,12 \cdot m_5 = 2 \Rightarrow \xi = 0,03331 \text{ kmol}$

$5,768 \cdot 0,767 = m_4 W_{E4}$

$m_2 + \xi \cdot 18,02 = m_5 W_{D5} \Rightarrow W_{D5} = 0,188$

$m_5 = 16,67 \text{ kg/h}$

$m_2 = 14,07 \text{ kg/h}$

celkem bilance

$m_4 = 4,702 \text{ kg/h}$

$W_{E4} = 0,9409$

$W_{B4} = 0,05911$

a)  $m_1 = 1,534 \text{ kg/h}$  ethanolu

b)  $m_2 = 14,07 \text{ kg/h}$  voda

c) 99,09% N<sub>2</sub> + 0,91% O<sub>2</sub>