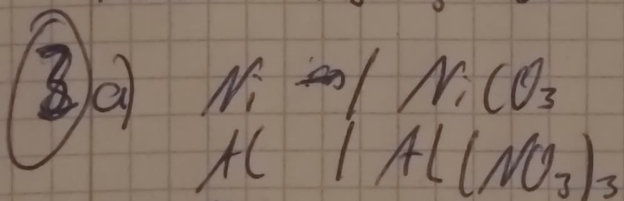
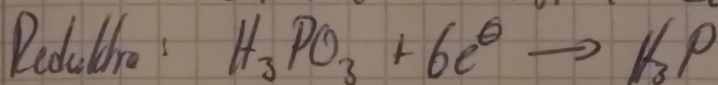
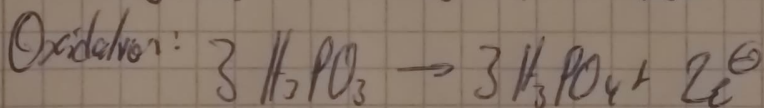
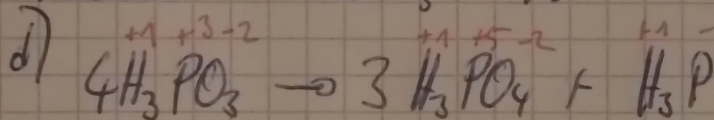
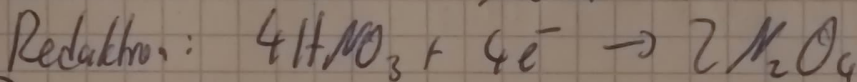
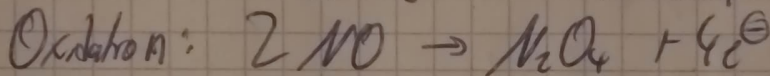
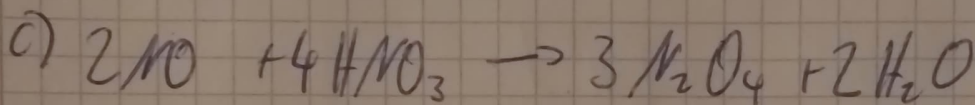
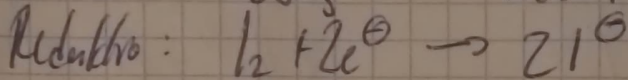
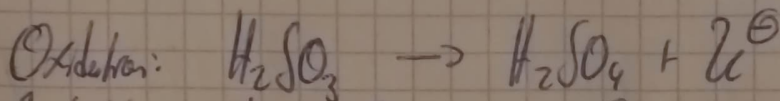
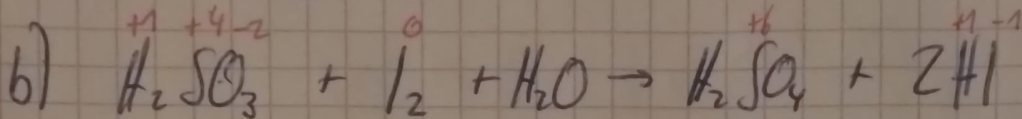
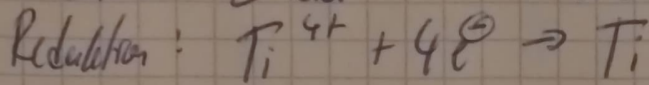
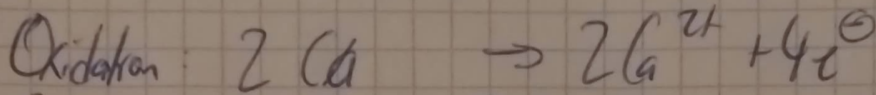
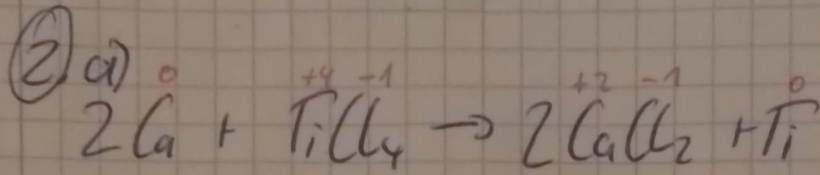
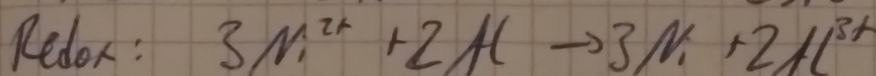
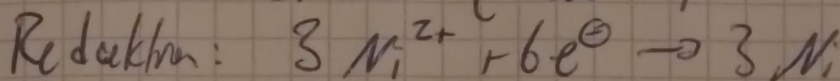


	Chemie	Praktikum	Redox	Reaktion	Form	Hoffmann
1.	$\overset{0}{I}_2$	$\overset{+3}{B}\overset{-1}{Br}_3$	$\overset{+4}{C}\overset{-2}{O}_2$	$\overset{+1}{H}\overset{-2}{O}^+$	$\overset{+2}{C}\overset{+1}{H}\overset{-1}{Cl}_3$	$\overset{-2}{C}\overset{+1}{H}\overset{-2}{O}\overset{+1}{H}$



→ Nickel reduziert (-0,28 V)

→ Aluminium oxidiert (-1,66 V)



b) $E_{MK} = E^0(\text{Kathode}) - E^0(\text{Anode}) = -0,28V - (-1,66V) = 1,38V$

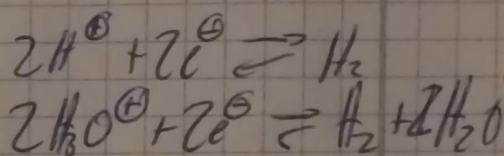
$$\textcircled{4} \quad E = E^0 + \frac{RT}{2F} \ln \left(\frac{[O_{\text{red}}]}{[Red]} \right) = \cancel{10.34V + 0.176V} + \cancel{8.3145} \\ = \frac{8.3145 \frac{J}{\text{mol} \cdot K} \cdot 298.15K}{2 \cdot 96485.34 \frac{C}{\text{mol}}} \cdot \ln \left(\frac{0.35 \frac{\text{mol}}{L}}{0.2 \frac{\text{mol}}{L}} \right) \approx 1.11V$$

$$\textcircled{5} \quad -\text{pH} = \log([H^+])$$

$$E_0(H_2) = 0$$

$$\frac{8.3145 \frac{J}{\text{mol} \cdot K} \cdot 298.15K}{96485.34 \frac{C}{\text{mol}}} \cdot 2.3 \approx 0.059$$

$$E = E^0 + \frac{0.059V}{2} \cdot \log \frac{[H^+]^2}{p_{H_2}}$$



$$\Rightarrow E = 0V + \frac{0.059V}{2} \cdot \log [H^+]^2$$

$$E = -0.059V \cdot \text{pH} = -0.413V$$