



OLIMPIADA NAȚIONALĂ DE CHIMIE

IAȘI, 23-27 aprilie 2025

Ediția a LVIII-a

BAREM DE EVALUARE ȘI NOTARE CLASA A VIII-A – PROBA PRACTICĂ

!!! Se punctează orice modalitate de rezolvare corectă a cerințelor !!!

Subiectul I _____ 100 puncte

Tabelul 1 _____ 49 puncte

11 x 3 puncte = 33 puncte (precipitate)

8 x 2 puncte = 16 puncte (substanțe dizolvate)

Tabelul 2 _____ 51 puncte

Tabelul 2

Încercarea	Ecuția reacției chimice	Punctaj
1 + 2	X	
1 + 3	$2\text{Na}_2\text{CO}_3 + 2\text{Mg}(\text{NO}_3)_2 + \text{H}_2\text{O} \rightarrow \text{Mg}_2(\text{OH})_2(\text{CO}_3)_2\downarrow + \text{CO}_2 + 4\text{NaNO}_3$	5p
1 + 4	$3\text{Na}_2\text{CO}_3 + 3\text{Pb}(\text{NO}_3)_2 + \text{H}_2\text{O} \rightarrow \text{Pb}_3(\text{OH})_2(\text{CO}_3)_2\downarrow + \text{CO}_2 + 6\text{NaNO}_3$	5p
1 + 5	$3\text{Na}_2\text{CO}_3 + 2\text{Al}(\text{NO}_3)_3 + 3\text{H}_2\text{O} \rightarrow 2\text{Al}(\text{OH})_3\downarrow + 3\text{CO}_2 + 6\text{NaNO}_3$	5p
1 + 6	$4\text{Na}_2\text{CO}_3 + 4\text{ZnSO}_4 + \text{H}_2\text{O} \rightarrow \text{Zn}_4(\text{OH})_2(\text{CO}_3)_3\downarrow + \text{CO}_2 + 4\text{Na}_2\text{SO}_4$	5p
1 + 7	X	
1 + 8	X	
2 + 3	X	
2 + 4	$\text{Na}_2\text{SO}_3 + \text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbSO}_3\downarrow + 2\text{NaNO}_3$	4p
2 + 5	$3\text{Na}_2\text{SO}_3 + 2\text{Al}(\text{NO}_3)_3 + 3\text{H}_2\text{O} \rightarrow 2\text{Al}(\text{OH})_3\downarrow + 6\text{NaNO}_3 + 3\text{SO}_2$	5p

2 + 6	$\text{Na}_2\text{SO}_3 + 2\text{ZnSO}_4 + 2\text{H}_2\text{O} \rightarrow 2\text{NaHSO}_4 + \text{Zn}_2(\text{SO}_3)(\text{OH})_2\downarrow$	5p
2 + 7	X	
2 + 8	X	
3 + 4	X	
3 + 5	X	
3 + 6	X	
3 + 7	X	
3 + 8	X	
4 + 5	X	
4 + 6	$\text{Pb}(\text{NO}_3)_2 + \text{ZnSO}_4 \rightarrow \text{PbSO}_4\downarrow + \text{Zn}(\text{NO}_3)_2$	4p
4 + 7	$\text{Pb}(\text{NO}_3)_2 + 2\text{NaI} \rightarrow \text{PbI}_2\downarrow + 2\text{NaNO}_3$	4p
4 + 8	$\text{Pb}(\text{NO}_3)_2 + 2\text{NaIO}_3 \rightarrow \text{Pb}(\text{IO}_3)_2\downarrow + 2\text{NaNO}_3$	4p
5 + 6	X	
5 + 7	X	
5 + 8	X	
6 + 7	X	
6 + 8	X	
7 + 8	$5\text{NaI} + \text{NaIO}_3 + 3\text{H}_2\text{SO}_4 \rightarrow 3\text{I}_2\downarrow + 3\text{Na}_2\text{SO}_4 + 3\text{H}_2\text{O}$	5p

Tabelul 1

eprubeta	1	2	3	4	5	6	7	8
1		X	Mg(OH) ₂ CO ₃ ↓ pp. alb	Pb ₃ (OH) ₂ (CO ₃) ₂ ↓ pp. alb pulverulent	Al(OH) ₃ ↓ pp. alb gelatinos	Zn ₄ (OH) ₂ (CO ₃) ₃ ↓ pp. alb	X	X
2			X	PbSO ₃ ↓ pp. alb pulverulent	Al(OH) ₃ ↓ pp. alb gelatinos	Zn ₂ (OH) ₂ SO ₃ ↓ pp. alb	X	X
3				X	X	X	X	X
4					X	PbSO ₄ ↓ pp. alb pulverulent	PbI ₂ ↓ pp. galben	Pb(IO ₃) ₂ ↓ pp. alb
5						X	X	X
6							X	X
7								I ₂ ↓ pp. brun
8								
Substanța dizolvată	Na ₂ CO ₃	Na ₂ SO ₃	Mg(NO ₃) ₂	Pb(NO ₃) ₂	Al(NO ₃) ₃	ZnSO ₄	NaI	NaIO ₃