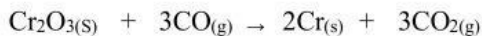


Nama :

Kelas :

A. Pereaksi Pembatas

Sebanyak 30,4 gram Cr_2O_3 direaksikan dengan 8,4 gram CO menurut reaksi:



Bila diketahui Ar C = 12, O = 16, dan Cr = 52

Tentukanlah:

- Pereaksi pembatas
- Pereaksi sisa
- Banyaknya mol zat tersisa
- Massa Cr yang terbentuk

Jawaban

$$\begin{aligned}\text{Mol Cr}_2\text{O}_3 &= \frac{\text{.....}}{\text{.....}} \quad (\text{ketikkan rumusnya}) \\ &= \frac{\text{.....}}{\text{.....}} \\ &= \text{..... mol}\end{aligned}$$

$$\begin{aligned}\text{Mol CO} &= \frac{\text{.....}}{\text{.....}} \quad (\text{ketikkan rumusnya}) \\ &= \frac{\text{.....}}{\text{.....}} \\ &= \text{..... mol}\end{aligned}$$

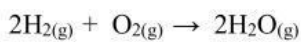
Persamaan reaksi

	$\text{Cr}_2\text{O}_{3(s)} + 3\text{CO}_{(g)} \rightarrow 2\text{Cr}_{(s)} + 3\text{CO}_{2(g)}$			
mula – mula	.....	.....	.....	.....
reaksi	.....	.....	.....	.....
sisa	.....	.....	.....	.....

- a. Pereaksi pembatas =
- b. Pereaksi sisa =
- c. Banyaknya mol zat yang tersisa = mol
- d. massa Cr yang terbentuk = x (ketikkan rumusnya)
- = x
- = gram

B. Persen Hasil

Perhatikan reaksi kimia di bawah ini



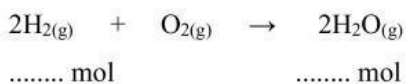
Dalam reaksi ini, 10 gram gas hidrogen (H_2) bereaksi dengan oksigen (O_2) menghasilkan 80 gram air (H_2O). Hitunglah persen hasil reaksi tersebut! (Ar H = 1, O = 16)

Jawaban

Massa H_2 = gram

Massa H_2O (massa sesungguhnya) = gram

$$\begin{aligned} \text{Mol } \text{H}_2 &= \frac{\text{.....}}{\text{.....}} \quad (\text{ketikkan rumusnya}) \\ &= \frac{\text{.....}}{\text{.....}} \\ &= \text{..... mol} \end{aligned}$$



$$\begin{aligned} \text{Massa } \text{H}_2\text{O} &= \text{.....} \times \text{.....} \quad (\text{ketikkan rumusnya}) \\ (\text{massa teoritis}) &= \text{.....} \times \text{.....} \\ &= \text{..... gram} \end{aligned}$$

$$\begin{aligned} \text{Persen hasil reaksi} &= \frac{\text{.....}}{\text{.....}} \times \text{.....} \quad (\text{ketikkan rumusnya}) \\ &= \frac{\text{.....}}{\text{.....}} \times \text{.....} \\ &= \text{.....} \% \end{aligned}$$

C. Persen Kemurnian

Dalam 50 gram pupuk urea ($\text{CO}(\text{NH}_2)_2$) terdapat 21 gram nitrogen. Tentukan kemurnian pupuk tersebut! (Ar C = 12, N = 14, O = 16, H = 1)

Jawaban

Kemurnian pupuk = %