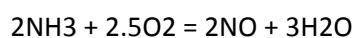


Answer on Question#60440 – Chemistry | General Chemistry

m(NO) = ?

m(NH₃) = 5.10 g



Solution:

Amount of substance ammonia and nitric oxid (for the chemical reaction) :

$$n(\text{NH}_3):n(\text{NO}) = 2:2 = 1:1$$

$$n = \frac{m}{M}; \frac{m(\text{NH}_3)}{M(\text{NH}_3)} = \frac{m(\text{NO})}{M(\text{NO})}$$

Molar masses of ammonia and nitric oxid:

$$M(\text{NH}_3) = 17.03 \text{ g/mol}$$

$$M(\text{NO}) = 30.01 \text{ g/mol}$$

$$m(\text{NO}) = M(\text{NO}) \times n(\text{NH}_3) = 30.01 \times \frac{5.10}{17.03} = 9.01 \text{ g}$$