

## Question #82495, Chemistry / General Chemistry | for completion

Suppose that the molar concentrations for CO and H<sub>2</sub> at equilibrium are [CO] = 0.03 M and [H<sub>2</sub>] = 0.04 M.

$$[\text{CH}_3\text{OH}] = (2.3 \times 10^4)(0.03)(0.04)^2$$

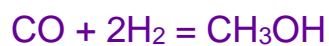
Answer:

K = 2.3 × 10<sup>4</sup> is not correct, maybe 2.3 × 10<sup>-4</sup>

$$[\text{CO}] = 0.03 \text{ M}$$

$$[\text{H}_2] = 0.04 \text{ M}$$

$$[\text{CH}_3\text{OH}] = ?$$



$$[\text{CH}_3\text{OH}] = K \times [\text{CO}] \times [\text{H}_2]^2$$

$$[\text{CH}_3\text{OH}] = (2.3 \times 10^{-4}) \times (0.03) \times (0.04)^2$$

$$[\text{CH}_3\text{OH}] = 0,0000001104 \text{ or } 1.104 \times 10^{-8} \text{ M}$$

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