

## Answer on Question #80616 - Chemistry - General Chemistry

Question:

$\text{CH}_3\text{OH} + \text{KF} \rightarrow \text{KOH} + \text{CH}_3\text{F}$  is a first order reaction for all of the reactants, with a rate constant of 0.0123 l/Ms. Find the instantaneous rate for this reaction if the initial concentration of  $\text{CH}_3\text{OH}$  is 0.59 M, and the initial concentration of  $\text{KF}$  is 1.22 M.

- A. 0.56 1/Ms
- B. 0.56 1/M<sup>2</sup>s
- C. 0.0089 M/s
- D. 0.0089 M<sup>2</sup>/s
- E. None of the Above

**Solution:**

$$V = k * [\text{CH}_3\text{OH}]^1 * [\text{KF}]^1;$$

$$V = 0.0123 * 0.59 * 1.22 = 0.0089 \text{ M/s};$$

So, correct answer – C (0.0089 M/s).

**Answer:** C. 0.0089 M/s.

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