

H432/03 June 2025

## Loose Sheet for Question 3(b)

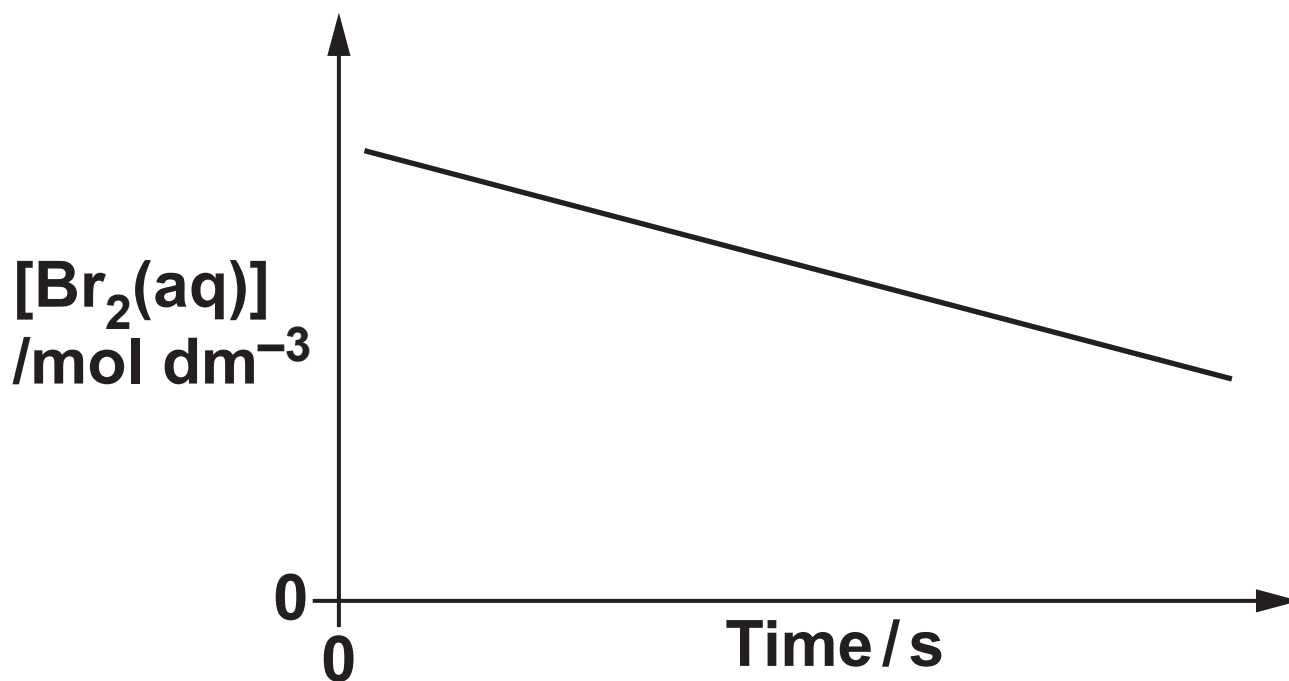
**EXPERIMENT 1**  
**ONLY  $[\text{CH}_3\text{COCH}_3(\text{aq})]$  is varied.**

| Initial concentrations                                         |                                                   |                                                  | Initial rate<br>$/\text{mol dm}^{-3} \text{s}^{-1}$ |
|----------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|
| $\text{CH}_3\text{COCH}_3(\text{aq})$<br>$/\text{mol dm}^{-3}$ | $\text{Br}_2(\text{aq})$<br>$/\text{mol dm}^{-3}$ | $\text{H}^+(\text{aq})$<br>$/\text{mol dm}^{-3}$ |                                                     |
| $1.50 \times 10^{-3}$                                          | $2.00 \times 10^{-1}$                             | $2.50 \times 10^{-1}$                            | $1.70 \times 10^{-7}$                               |
| $4.50 \times 10^{-3}$                                          | $2.00 \times 10^{-1}$                             | $2.50 \times 10^{-1}$                            | $5.10 \times 10^{-7}$                               |



## EXPERIMENT 2

ONLY  $[\text{Br}_2(\text{aq})]$  is varied.



## EXPERIMENT 3

ONLY  $[\text{H}^+(\text{aq})]$  varied.

