



FREE RADICAL SUBSTITUTION 3

1) For the conversion of ethane to 1,1-dibromoethane.

a) Give the overall equation.

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b) Give the pair of propagation steps to form bromoethane from ethane.

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c) Give the pair of propagation steps to form 1,1-dibromoethane from bromoethane.

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d) Give the termination step that forms butane.

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2) For the conversion of methane to tetrachloromethane.

a) Give the overall equation.

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b) Give the pair of propagation steps to form chloromethane from methane.

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c) Give the pair of propagation steps to form tetrachloromethane from trichloromethane.

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d) Give the termination step that forms a substance with the empirical formula CCl_3 .

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3) For the conversion of 2-iodopropane to 1,2-diiodopropane.

a) Give the overall equation.

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b) Give the pair of propagation steps to form 1,2-diiodopropane from 2-iodopropane.

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c) Give the termination step that forms a substance with empirical formula C_3H_6I .

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4) For the conversion of 1,1,1-tribromoethane to 1,1,1-tribromo-2,2,2-trichloroethane.

a) Give the overall equation.

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b) Give the pair of propagation steps to form 1,1,1-tribromo-2-chloroethane from 1,1,1-tribromoethane.

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c) Give the pair of propagation steps to form 1,1,1-tribromo-2,2,2-trichloroethane from 1,1,1-tribromo-2,2-dichloroethane.

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d) Give the termination step that forms a bromoalkane.

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