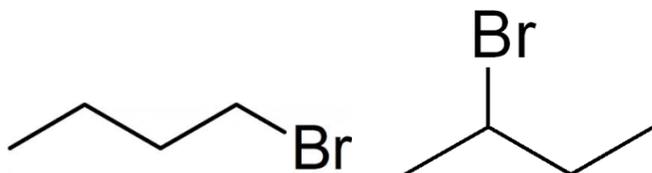


Answer on Question # 83147, Chemistry/ Organic Chemistry

Which molecule would have a higher boiling point, 1-bromobutane or 2-bromobutane? Why?

Answer



1-bromobutane

2-bromobutane

Both compounds are isomers and share the molecular formula C_4H_9Br , but 2-bromobutane is a branched isomer. Branched isomers have a more compact shape, decreased area of contact, decreased van der Waals attractive forces between neighbors what results in lower boiling temperature of branched isomers in comparison with non-branched isomers. Therefore 1-bromobutane will have a higher boiling point in comparison with 2-bromobutane.

Compound	1-bromobutane	2-bromobutane
Temperature	102 ^o C	91 ^o C

Answer provided by www.AssignmentExpert.com