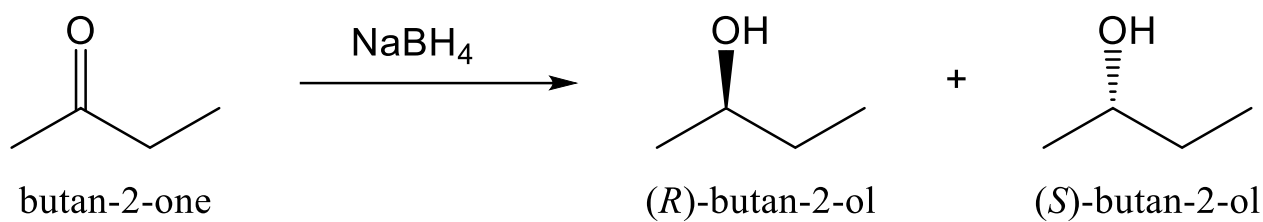


Question #64719 – Chemistry – Organic Chemistry

**Question:** Reduction of butan-2-one with  $\text{NaBH}_4$  yields butan-2-ol. Explain why the product is chiral but not optically active.

**Answer:**

Reduction of butan-2-one leads to racemic mixture of (R)- and (S)- butan-2-ol. The enantiomers are optically active separately, but in racemic mixture they cancel each other out.



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