

# Synthesis of 4-*tert*-Butylperoxy-4-methylpentan-2-one and 3-*tert*-Butylperoxy-3-methylbutanoic Acid

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**Abstract**—Alkylation of *tert*-butyl hydroperoxide with 1,3-diols gave the corresponding hydroxy-containing ditertiary peroxides which were oxidized with pyridinium chlorochromate to carbonyl-containing peroxides. 3-*tert*-Butylperoxy-3-methylbutanal was oxidized with oxygen at room temperature to obtain 3-*tert*-butylperoxy-3-methylbutanoic acid.

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