

# *p*-Bromophenacyl-8™ Reagent

TS-48891

1521.0

Number	Description
TS-48891	<b><i>p</i>-Bromophenacyl-8™ Reagent</b> , 10 ml Hypo-Vial™ Storage Vial, contains 0.1 mmol/ml <i>p</i> -bromophenacyl bromide and 0.005 mmol/ml crown ether in acetonitrile Molecular Weight: 277.94 $\lambda_{\text{max}}$ : 260 nm  <b>Storage:</b> Upon receipt store product at room temperature.

## Introduction

*p*-Bromophenacyl-8™ Reagent is an excellent derivatization reagent that reacts with carboxylic acids. This reagent is used for preparing phenacyl esters, which are used to separate many saturated and unsaturated fatty acids<sup>1-2</sup> for UV detection in HPLC applications with low nanomole sensitivity. *p*-Bromophenacyl-8™ Reagent is also useful for studying acid composition of bacterial cell walls.<sup>3-4</sup>

## Procedure for Preparing Phenacyl Esters

1. Dissolve ~10 mg acid in MeOH in a 5.0 ml Reacti-Vial™ Small Reaction Vial (Product No. TS-13223) fitted with a magnetic stirrer (Product No. TS-16000). Neutralize to the phenolphthalein endpoint with 85% KOH in MeOH.

**Note:** If the formation of potassium salts is undesirable, instead of using KOH, neutralize by adding KHCO<sub>3</sub> at 3-5 times the molar equivalent of the free acid.

2. Evaporate the MeOH with N<sub>2</sub>.

3. Add 1.0 ml of *p*-Bromophenacyl-8™ Reagent and 2.0 ml dry acetonitrile to the reaction vial.

4. Heat reaction at 80°C with stirring for 30 minutes.

5. Remove reaction vial from the heating block and allow it to cool.

6. Analyze solution by HPLC. Use a reverse phase C<sub>18</sub> column with acetonitrile and water as the mobile phase.

## Cited References

- Ahmed, M. S., *et al.* (1980). Use of *p*-bromophenacyl bromide to enhance ultraviolet detection of water-soluble organic acids (steviolbioside and rebaudioside B) in high-performance liquid chromatographic analysis. *J. Chromatogr.* **192**:387-93.
- Borch, R. F. (1975). Separation of long chain fatty acids as phenacyl esters by high pressure liquid chromatography. *Anal. Chem.* **47**(14):2437-9.
- Manzoor, S. E., *et al.* (1999). Reduced glutaraldehyde susceptibility in *Mycobacterium chelonae* associated with altered cell wall polysaccharides. *J. Antimicrob. Chemother.* **43**:759-765.
- Sokolovská, I., *et al.* (2003). Carbon source-induced modifications in the mycolic acid content and cell wall permeability of *Rhodococcus erythropolis* E1. *Appl. Environ. Microbiol.* **69**(12):7019-27.

## General Reference

Knapp, D. R. (1979). Handbook of analytical derivatization reactions. John Wiley and Sons, New York; Chapter 3.

Current versions of product instructions are available at [www.thermo.com/columns](http://www.thermo.com/columns).

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