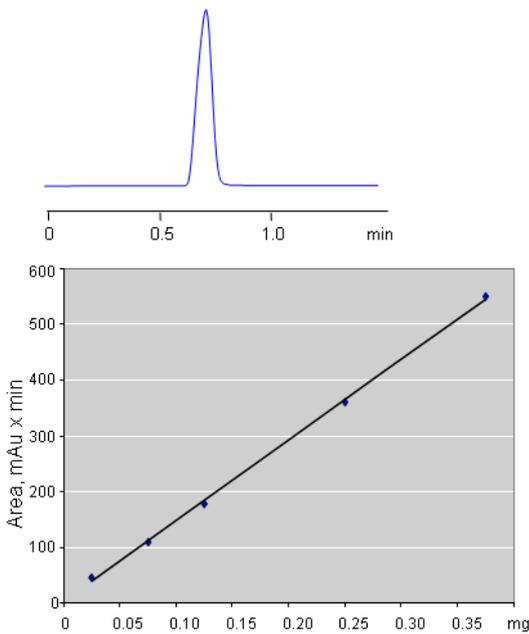


## HPLC Derivatization and Quantitative Analysis of Glycerol



**Column:** Primesep N  
**Size:** 4.6 x 50 mm  
**Flow:** 1.0 mL/min  
**Mobile phase:** MeCN/H<sub>2</sub>O-80/20  
**Detection:** UV 410 nm  
**Sample:** 0.75 mL (0.05% solution glycerol/H<sub>2</sub>O) with 1 mL Reagent A and 2.5 mL reagent B  
**Injection volume:** 1  $\mu$ L

### Derivatization reagents:

**Reagent A** (Periodate reagent): 6.5 mg NaIO<sub>4</sub> in 9 mL of water, add 1 mL acetic acid, mix and add 0.77 g ammonium acetate

**Reagent B** (Acetylacetone reagent): 0.25 mL of Acetylacetone to 24.75 mL of isopropanol, mix and store in the dark.

### Procedure

Add 1 mL of **Reagent A** to hydrolysate and keep 5 min at room temperature.

Add 2.5 mL **Reagent B**, mix and keep 20 min

Glycerol is a polyol hydrophilic compound which is used in pharmaceutical formulations. It is also a byproduct of biodiesel production through transesterification. Glycerol has three hydroxyl groups, making it a very polar compound. Method using periodate/acetylacetone derivatization was developed using UV. Method is fast and shows good linearity within explored range of concentrations. This general HPLC approach can be used for precise quantitation of glycerol.

### Method Parameters

Detection	UV Detection
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Quelle: <https://sielc.com/Application-HPLC-Derivatization-and-Quantitative-Analysis-of-Glycerol>