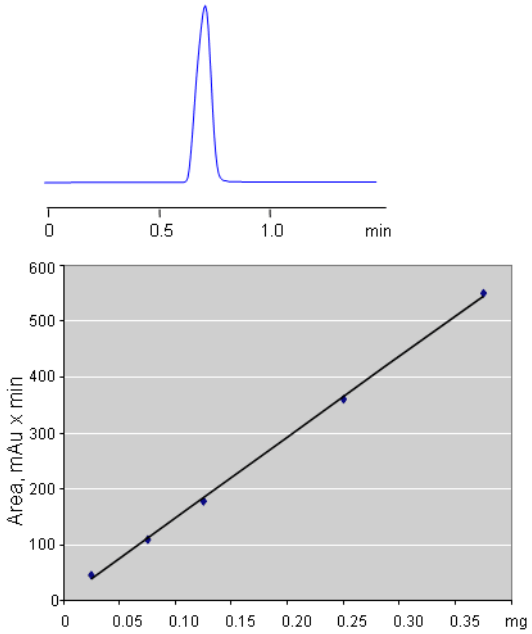
# HPLC Derivatization and Quantitative Analysis of Glycerol




**Column:** **Primesep N**
**Size:** 4.6 x 50 mm
**Flow:** 1.0 mL/min
**Mobile phase:** MeCN/$H_2O$-80/20
**Detection:** UV 410 nm
**Sample:** 0.75 mL ( 0.05% solution glycerol/$H_2O$) with 1 mL Reagent A and 2.5 mL reagent B
**Injection volume:** 1 uL

**Derivatization reagents:**

**Reagent A** ( Periodate reagent): 6.5 mg NaIO4 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 biodisel production through transesterification. Glycerol has three hydroxyl groups, making it a very polar compound. Method using periodate/acetylacteone 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

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|---|---|
| **Detection** | UV Detection |

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