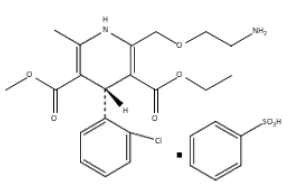
LT128
GL Sciences Inc.

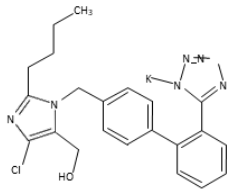
# Analysis of Amlodipine and Losartan Potassium

Both amlodipine and losartan potassium are sold worldwide as drug for hypertension. Combination drug containing the two is also studied.
In this note, chromatograms of simultaneous analysis of amlodipine and losartan were shown under two different HPLC condition using Inertsil ODS-4. Condition 1 is based on the assay of amlodipine besylate tablets of United States Pharmacopeia (USP). Condition 2 is a method using eluent of simpler composition. Application for each individual ingredient is also shown in LC technical note No.98 and No.126.

## Chemical Structure



Amlodipine Besylate



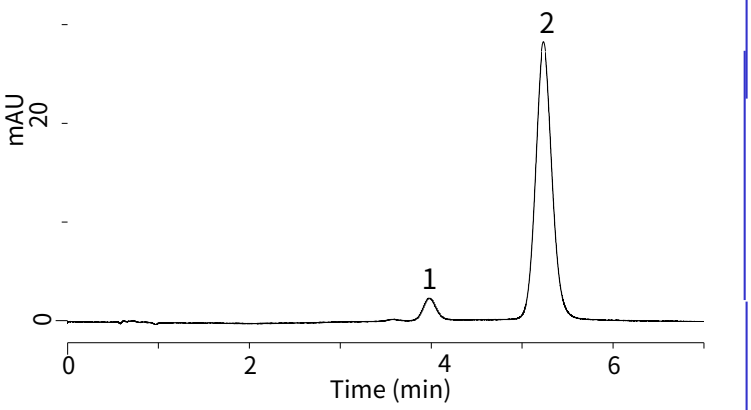
Losartan Potassium



## HPLC Condition 1

### Standard Solution

1. Amlodipine Besylate (5 mg/L)
2. Losartan Potassium (50 mg/L)

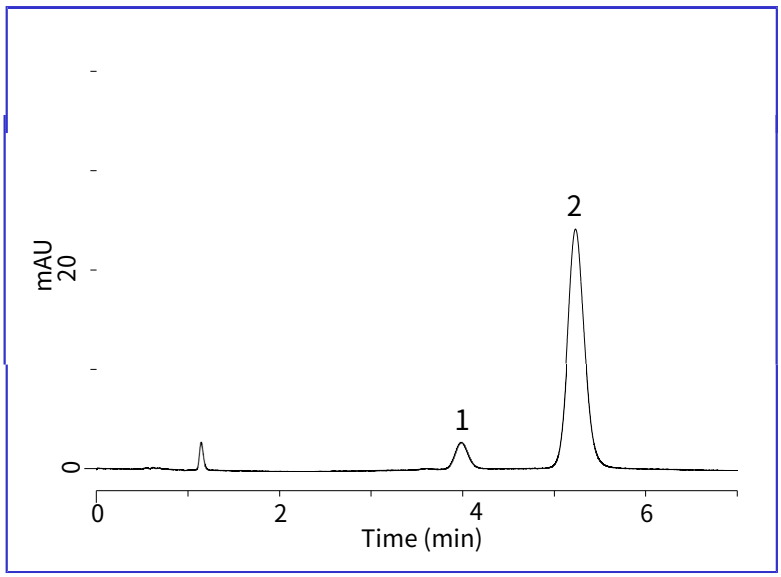



### Conditions

| | |
|---|---|
| Column | : Inertsil ODS-4 HP (3 µm, 50 x 4.6 mm I.D.) |
| Cat. No. | : 5020-14068 |
| Eluent | : A) $CH_3OH$<br>B) $CH_3CN$<br>C) 0.7 % Triethylamine (pH 3.0, $H_3PO_4$)<br>A/B/C =7/3/10, v/v/v |
| Flow rate | : 1.0 mL/min |
| Column Temp. | : 25 °C |
| Detection | : UV 237 nm |
| Injection Vol. | : 5 µL |

## Tablet Sample

The sample concentration was adjusted to 5 mg/L and 50 mg/L as amlodipine and losartan potassium, respectively.




## Example of Pretreatment Method for Tablet Sample

**Sample**
- Grind tablet into powder
- Weigh the powder equivalent to one tablet

**Extraction**
- Add diluent*
- Sonication extraction for 5 min
- Make up to 100 mL with diluent

**Filtration**
- 0.45 µm membrane filter

**Dilution**
- Adjust the concentration of amlodipine and losartan potassium to 5 mg/L and 50 mg/L, respectively, by adding diluent.

**HPLC**

* Diluent: eluent

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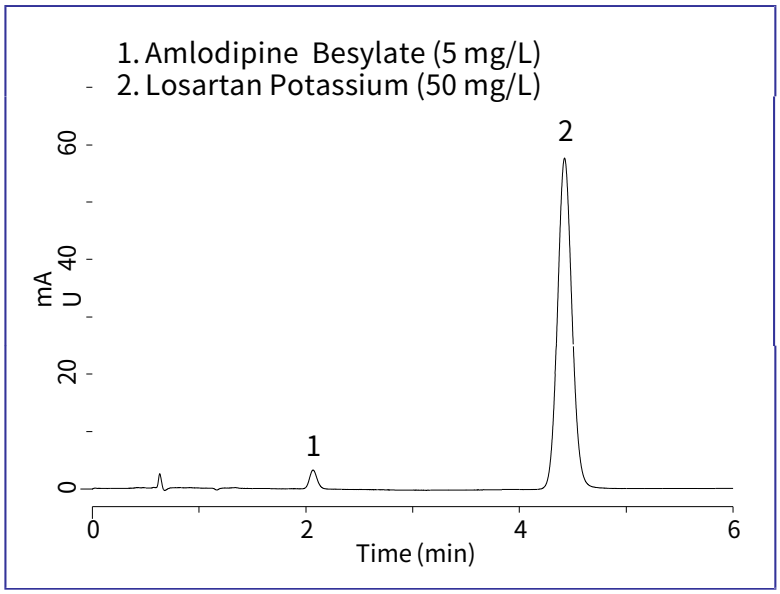
# HPLC Condition 2

## Standard Solution

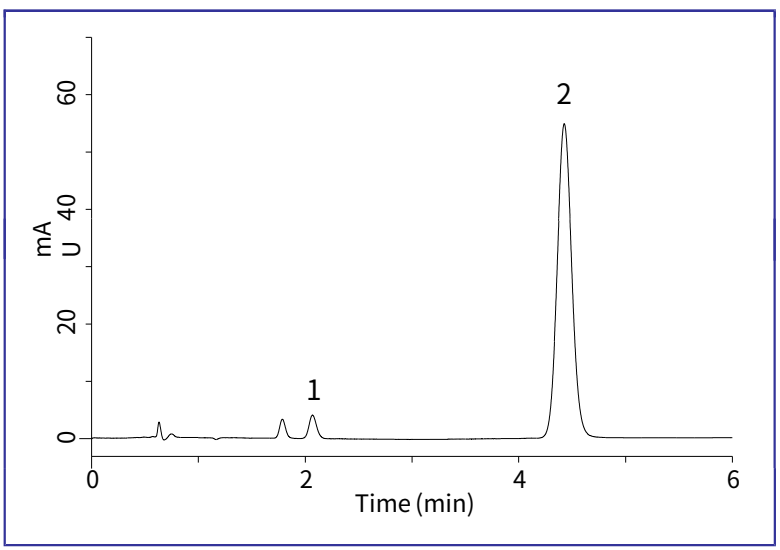



### Conditions

| | |
|---|---|
| **Column** | : Inertsil ODS-4 HP (3 µm, 50 x 4.6 mm I.D.) |
| **Cat. No.** | : 5020-14068 |
| **Eluent** | : A) $CH_3CN$<br>B) 0.02 % Triethylamine (pH 2.5, $H_3PO_4$)<br>A/B =35/65, v/v |
| **Flow rate** | : 1.0 mL/min |
| **Column Temp.** | : 30 °C |
| **Detection** | : UV 226 nm |
| **Injection Vol.** | : 5 µL |

## Tablet Sample

The sample concentration was adjusted to 5 mg/L and 50 mg/L as amlodipine and losartan potassium, respectively.




### Example of Pretreatment Method for Tablet Sample

**Sample**
- Grind tablet into powder
- Weigh the powder equivalent to one tablet

**Extraction**
- Add diluent**
- Sonication extraction for 5 min
- Make up to100 mL with diluent

**Filtration**
- 0.45 µm membrane filter

**Dilution**
- Adjust the concentration of amlodipine and losartan potassium to 5 mg/L and 50 mg/L, respectively, by adding diluent

**HPLC**

** Diluent: A/B = 50/50, v/v



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