

新製品!



# METHODSNow™

A CAS SOLUTION

## MethodsNow : 物質の分析手法を簡単に検索可能!

- 膨大な文献コレクションから分析手法に特化し抽出! 15 万件以上の分析手法を収録した, 世界最大の実験プロトコルデータベース!
- キーワード検索やカテゴリ検索, 絞り込み機能により柔軟な検索が可能.
- 分析手法に関する物質の詳細, 使用機器, 手順など詳しい内容を簡単に確認.
- 分析に用いた物質の構造や CAS 登録番号も併せて確認可能.
- 複数の検索結果を一画面で比較でき, PDF, XLS 形式にて保存可能.

専用のインターフェイスからアクセス!

### Search

Enter keyword, matrix, analyte, etc.

caffeine

caffeine

### キーワード検索

- キーワードサジェスト
- 表記のゆれを考慮した検索
- 複数の項目を組み合わせた検索

Browse Method Categories

Agricultural Applications / Analysis

Bioassays

Biomolecule Isolation

Environmental Analysis

Food Analysis

Fuels / Geology / Biofuels

Historical Analysis / Dating

Miscellaneous

Organic Compound Analysis

Organometallics / Inorganics

Pharmacology / Toxicology

Polymer Analysis

Water Analysis

Recent Searches

caffeine

### カテゴリ検索

カテゴリ例：  
医薬品有効成分の分析,  
食品分析, 水質分析 など

あらゆる観点から目的物質の分析手法を検索可能!

試験 同定 単離 測定  
精製 分離 抽出 ...

これらの方法を調べたいと思った方は  
**MethodsNow** が最適です!

Results (36)

### Analysis of Caffeine in Green tea beverages by Reversed-phase HPLC

CAS MN: 1-124-CAS-108283

View Details & Instructions

Add to Compare

Analyte Caffeine

Matrix Green tea beverages

Other Materials Material: Chromatographic C<sub>18</sub> column (0.46 cm x 25 cm, 5 μm); 0.2 μm filter

Method Category Food Analysis

Technique Reversed-phase HPLC; UV-visible spectroscopy; Extraction

Equipment Used HPLC system; HPLC pump system; UV detector; Injection valve (20 μL sample loop); Microprocess Controlled Bench-top Ultrasonic Cleaner

Source Extraction of caffeine from Korean green tea

Jin, Y.; Xiang, H.; Jin, Y. S.; Shin, Y. K.; Lee, K. J.

### 絞り込み機能

絞り込み項目：  
分析対象, マトリックス,  
カテゴリ, 分析手法,  
出典の発行年

## Analysis of Caffeine in Green tea beverages by Extr

CAS MN: 1-124-CAS-115274

Method Category: Food Analysis

Technique: Spectrophotometry; HPLC; Extraction

| Materials                     | Role     |
|-------------------------------|----------|
| Epicatechin gallate           | analyte  |
| :                             |          |
| Caffeine                      | analyte  |
| Green tea beverages           | matrix   |
| TC-C 18 column (4.6 × 150 mm) | material |
| Water                         | reagent  |

### Source

Effect of water quality on the nutritional components and antioxidant activity of

Zhou, Danrong; Chen, Yuqiong; Ni, Dejiang

### Equipment Used

HPLC system, VARIAN, USA

### Conditions

#### Instrument

TC-C 18 column, (4.6 × 150 mm); mobile phase -methanol (with 0.1% formic acid) and  
-1.0 mL/min and injection volume-20 µL

### Instructions

#### Preparation of distilled water

1. Prepare distilled water (DW) by laboratory water system.

#### Preparation of green tea extracts (GTEs) with distilled water

1. Collect low-grade green tea sample and extract 100 g of tea with 1,200 mL of boiling water (distilled water) at 100 °C for 15 min for three times.
2. Concentrate the infusions on a rotary evaporator under reduced pressure.
3. Dry them by using vacuum -concentration (N1001, EYELA; Germany) at 55 ± 2 °C.
4. Dilute GTE to 10 mL with ultrapure water and filter them.

#### High performance liquid chromatography (HPLC)

1. Perform analysis on HPLC system (VARIAN, USA).
2. Use an Agilent TC-C 18 column, (4.6 × 150 mm, USA) for separation.
3. Use methanol (with 0.1% formic acid) and water (with 0.1% formic acid) as mobile phase.
4. Set the flow rate at 1.0 mL/min.
5. Inject 20 µL of sample.
6. Set the detector wavelen

### Validation

|                |  |
|----------------|--|
| Retention Time | ~6.5 min (read from figure), (-)-Epigallocatechin        |
|                | ~7 min (read from figure), (+)-Catechin                  |
|                | ~9.5 min (read from figure), Caffeine                    |
|                | ~11 min (read from figure), (-)-Epigallocatechin gallate |
|                | ~14 min (read from figure), (-)-Epicatechin              |
|                | ~23.5 min (read from figure), (-)-Epicatechin gallate    |
| Concentration  | 1.34 ± 0.05%, Caffeine                                   |

詳細な手法、バリデーションを  
分かりやすく表示！

### レコード内容

- 分析に用いた物質情報
- 出典 (論文タイトル, 著者名, 雑誌名, 抄録)
- 使用機器
- 条件
- 分析手法
- バリデーション

|                   | 1  | 2   |
|-------------------|--|---|
| Title             | Analysis of Caffeine in Green tea beverages by Extraction  | Analysis of Gallic acid in Green tea beverages by Extraction  |
| CAS Method Number | 1-124-CAS-115274   | 1-124-CAS-29775   |
| Method Category   | Food A   |   |
| Technique         | Spectn   | : detectors; HPLC;  |
| Analyte           | Epicatechin gallate; Epigallocatechin gallate  | Epigallocatechin gallate; Epigallocatechin gallate  |
| Matrix            | Green tea beverages  | oolong tea beverages; Tea products; Green tea beverages; Camellia sinensis                              |
| Other Materials   | Water; TC C 18 column (4.6 × 150 mm)   | Water; 0.45 µm membrane filter; Kromasil C <sub>18</sub> column (250 mm × 4.6 mm, 5 µm)                 |
| Equipment Used    | HPLC system, VARIAN, USA; Spectrophotometer; pH meter; pH-B, Shanghai, China; Vacuum oven, N1001, EYELA, Germany | MIL; High performance liquid chromatographic system, Shimadzu, Kyoto, Japan; Diode array detector (DAD) |

レコード比較機能  
(最大 3 レコード)

HPLC

UV - vis



**METHODSNOW™**  
A CAS SOLUTION

GC / MS

Extraction

- ◆ 分析作業効率の改善を図りたい方。
- ◆ より簡単に、正確に分析手法を検索されたい方。
- ◆ 新しい物質の分析手法を模索されている方。

**MethodsNow** をお試しください！

無料トライアル実施中！ご興味のある方はお問い合わせください