

# CAS ANALYTICAL METHODS™ 検索ガイド

© 2024 American Chemical Society. All rights reserved.



## CAS ANALYTICAL METHODS の概要

2 © 2024 American Chemical Society. All rights reserved.



# CAS Analytical Methods の概要

多岐にわたる分野の分析手法を効率的に検索

収録分野：

- 薬理学、HPLC 分析、食品分析、天然物単離分析、水分析など

収録内容：

- 測定機器、手順、バリデーションデータを含む詳細な分析情報

CAS が保有する文献コレクションから、  
分析の情報を抽出し、項目ごとに整理してデータベース化



## 収録範囲

項目	内容
収録源	CAS SciFinder® に収録の雑誌論文 例: Journal of Natural Medicines, Journal of Chromatography A, B, Journal of Pharmaceutical and Biomedical Analysis, Talanta, Analytica Chimica Acta
収録分野	医薬、農学、化学を中心とした科学分野
レコード構成	分析手法単位
収録期間	2000 年～

# 検索の流れ

5

© 2024 American Chemical Society. All rights reserved.



## ① アクセス

アクセス URL: <https://methods.cas.org/>

CAS Analytical Methods

Log in to Analytical Methods

Username or Email Address

Username (ID)、パスワードは CAS SciFinder と共通

Can't log in?

CAS SciFinder

References Suppliers

CAS SCIFINDER DISCOVERY PLATFORM

CAS SciFinder

CAS Analytical Methods

CAS Formulus

STN IP PROTECTION SUITE

CAS SciFinder からも アクセス可能

6

© 2024 American Chemical Society. All rights reserved.



## ② 検索の実行

**Explore Methods**  
Search methods using criteria like method categories and subcategories.

**Advanced Search**  
Search methods using criteria like keywords, analytes, matrices and more.

**キーワード検索**  
分析対象やマトリックス\* など分析に関するキーワードから検索する

**カテゴリ検索**  
Explore Methods  
Category Name  
Agricultural Applications / Analysis  
Biosciences  
Biomolecule Isolation  
Environmental Analysis  
Food Analysis  
Fuels / Geology / Biofuels  
Historical Analysis / Dating  
Miscellaneous  
Organic Compound Analysis  
Organometallics / Inorganics  
Pharmacology / Toxicology  
Polymer Analysis  
Water Analysis

選択したカテゴリに関する分析方法を検索する

**詳細検索**  
分析対象やマトリックスなど複数の対象を組み合わせる検索する

**Advanced Search**  
Analyte: glucose  
AND Matrix: honey  
Add Search Criteria  
Clear

\* マトリックスとは分析対象を含む試料または媒体のこと

## ③ 回答の絞り込み

**Filter By**  
Analyte: Phenols (51128), Flavonoids (43351), Tannins (12228), Quercetin (12113), Gallic acid (11921)  
Matrix: Leaf (50287), Root (14630), Plant organ (12351), Stem (12100), Flower (9783)  
Method Category  
Technique  
Year: 2000 to 2024

**Sort**  
関連度または発行年による並べ替えが可能

**Group**  
分析手法または資料によるグループ化が可能

**回答の保存**  
Save

**④ 回答の詳細へ**

**Results for Natural Product Isolation Analysis**  
177,675 Results  
1  
Analysis of Chlorogenic acid in Purple Corn  
By: Boateng, Isaac Du Joseph; Flint-Garcia, S...  
From purple corn waste product qualities used in Industrial Crops and Products  
Analyte: Pericarp; Zea mays, purple corn  
Matrix: Reagent: Ethanol; Acetic acid; Hydrochloric acid; Methanol  
Other Materials: Material: 5-mesh sieve; No. 10 mesh; Vacuum filter (0.45 µm); Filter (0.22 µm); C18 column (5 µm, 250 mm x 4.6 mm)  
Method Category: Natural Product Isolation Analysis  
Technique: Maceration extraction; Liquid chromatography diode array detectors; HPLC  
Equipment Used: Sifter; Mill; Aspirator; Centrifuge; Centrifuge; High performance liquid chromatography system; Diode array detector; Stirrer  
View Abstract - Full Text - View in CAS SciFinder

2  
Analysis of Saponins in Pharmaceutical natural products, HuangQi by Biological digestion  
By: Chen, Cai-Yun; Zhang, Run; Zhang, Lrjie; Hu, Zhi-Yong; Wang, Shao-Ping; Mei, Xue; Mi, Wei; Zhang, Jia-Yu  
Biotransformation and bioaccessibility of active ingredients from Radix Astragalii by Poria cocos during solid-state fermentation and in vitro digestion and antioxidant activity evaluation  
Scientific Reports (2023), 13 (1), - Nature Portfolio  
Analyte: Saponins

## ④ 回答の詳細を表示 (1/2)

- タイトル
- 物質情報
- 分析カテゴリー  
分析手法名
- 使用機器、条件
- 分析手順
- バリデーション  
(妥当性の検証結果)
- 収録源  
(雑誌名、著者名、  
出典のタイトル、抄録など)

**タイトル**

**分析カテゴリー  
分析手法名**

**物質情報**

**使用機器**

**分析手順**

**条件**

9

© 2024 American Chemical Society. All rights reserved.



## ④ 回答の詳細を表示 (2/2)

- タイトル
- 物質情報
- 分析カテゴリー  
分析手法名
- 使用機器、条件
- 分析手順
- バリデーション  
(妥当性の検証結果)
- 収録源  
(雑誌名、著者名、  
出典のタイトル、抄録など)

**収録源**

**分析手順 (続き)**

**出典文献情報を  
CAS SciFinder で表示**

**バリデーション**

10

© 2024 American Chemical Society. All rights reserved.



## ⑤ 回答の保存・ダウンロード

Results for Natural Product Isolation Analysis

検索結果

↓ Save

Filter By

2 Selected 177,893 Results

Sort: Relevance Group: By Method

^ Analyte

Phenols (51202)

1

Analysis of Phenols in Solanum marginatum by Solvent extraction

JOURNAL

回答の保存  
保存した回答は画面右上から確認可能

Return to Results

← Prev (1) 回答の詳細

↓ Save

CAS Method Number

1-131-CAS-331337

Method Category

Natural Product Isolation Analysis

Techniques

Download PDF または XLS 形式でダウンロード可能

11

© 2024 American Chemical Society. All rights reserved.



## ⑥ 検索結果の比較

1

Analysis of Phenols in Hibiscus sabdariffa by Maceration extraction

JOURNAL

By: Climaco, Gabrielli Nunes; Vardanega, Renata; Fasolin, Luiz Henrique; et al. Hibiscus sabdariffa L. leaves as an alternative source of bioactive compounds: A review of technologies

Journal of Supercritical Fluids (2023), 200, -. Elsevier B.V.

Compare

クリックすると下記のポップアップが表示される

Compare up to 3 Methods

最大 3 件の分析手法を表形式で出力する

Compare

Analysis of Phenols in Hibiscus sabdariffa by Maceration extraction

Analyte(s): Phenols

Matrix: Leaf, Hibiscus sabdariffa

Method Category: Natural Product Isolation...

Analysis of Phenols in Leaf by Ultrasonic extraction

Analyte(s): Phenols

Matrix: Leaf, Olea europaea

Method Category: Natural Product Isolation...

Analysis of Phenols in Garcinia cowa by Solvent extraction

Analyte(s): Phenols

Matrix: Garcinia cowa; Leaf; Root; Stem

Method Category: Natural Product Isolation...

12

© 2024 American Chemical Society. All rights reserved.



## ⑥ 検索結果の比較 (続き)

表にすることで分析手法の  
各項目を簡単に比較できる

Comparing your 3 selected Methods

ダウンロード  
出力した表は PDF または  
XLS 形式でダウンロード可能

	Method 1	Method 2	Method 3
	Analysis of Phenols in Hibiscus sabdariffa by Maceration extraction	Analysis of Phenols in Leaf by Ultrasonic extraction	Analysis of Phenols in Garcinia cowa by Solvent extraction
CAS Method Number	1-131-CAS-571070	1-131-CAS-571043	1-131-CAS-570845
Method Category	Natural Product Isolation Analysis	Natural Product Isolation Analysis	Natural Product Isolation Analysis
Technique	Maceration extraction; Spectrophotometry	Ultrasonic extraction; Spectrophotometry	Colorimetry; Solvent extraction
Analyte	Phenols	Phenols	Phenols
Matrix	Leaf; Hibiscus sabdariffa	Leaf; Olea europaea	Garcinia cowa; Leaf; Root; Stem
Other Materials	Sodium carbonate; Ethanol; Folin-Ciocalteu reagent	Sodium carbonate; Ethanol; Folin-Ciocalteu reagent	Sodium carbonate; Chloroform; Folin-Ciocalteu reagent
Equipment Used	Mill, MA-340, Marconi, Piracicaba, Brazil;	Ultrasonic bath, 3000866;	UV-VIS spectrophotometer

## CAS SCIFINDER との連携

# CAS SciFinder で分析手法を確認

① CAS SciFinder で文献検索を実行し、Analytical Methods に限定する

References search for "Colorimetry"

Filtering: CAS Solutions: Analytical Methods

9,493 Results

Sort: Times Cited View: Partial Abstract

1

**Highly Photoluminescent Carbon Dots for Multicolor Patterning, Sensors, and Bioimaging**

By: Zhu, Shoujun; Meng, Qingnan; Wang, Lei; Zhang, Junhu; Song, Yubin; Jin, Han; Zhang, Kai; Sun, Hongchen; Wang, Haiyu; Yang, Bai

Angewandte Chemie, International Edition (2013), 52(14), 3953-3957 | Language: English, Database: C.A.P.us and MEDLINE | Analytical Methods

Highly photoluminescent carbon dots (CDs) were prepared by hydrothermal method. The reaction was conducted by first condensing citric acid and ethylenediamine, whereupon they formed polymer-like CDs, which were then carbonized to form the CDs. The CDs were applied both as printing inks, which are capable of producing multicolor patterns on the microscale, and as functional nanocomposites that could potentially be used in anti-counterfeit applications. Furthermore, the CDs could be utilized as a biosensor reagent capable of detecting Fe<sup>3+</sup> in biosystems.

Full Text

Substances (6) Reactions (0) Citing (2,704) Citation Map

2

Graphene Oxide-Based Carbon Dots for Biosensing and Catalysis

By: Song, Yubin; Jin, Han; Zhang, Kai; Sun, Hongchen; Wang, Haiyu; Yang, Bai

Angewandte Chemie, International Edition (2013), 52(14), 3953-3957 | Language: English, Database: C.A.P.us and MEDLINE

The authors strongly recommend the use of this method for the detection of Fe<sup>3+</sup> in the presence of H<sub>2</sub>O<sub>2</sub>.

CAS Solutions フィルターで CAS Analytical Methods に分析手法が収録されている文献に限定できる

# CAS SciFinder で分析手法を確認

② 文献レコード中の Analytical Methods のリンクをクリックする

CAS

Highly Photoluminescent Carbon Dots for Multicolor Patterning, Sensors, and Bioimaging

Analysis of Iron by Dialysis

CAS Analytical

In this Reference

- Concepts
- Substances
- Analytical Methods**
- Cited Documents

By: Zhu, Shoujun; Meng, Qingnan; Wang, Lei; Zhang, Junhu; Song, Yubin; Jin, Han; Zhang, Kai; Sun, Hongchen; Wang, Haiyu; Yang, Bai

DOI: 10.1002/anie.201300519

Highly photoluminescent carbon dots (CDs) were prepared by hydrothermal method. The reaction was conducted by first condensing citric acid and ethylenediamine, whereupon they formed polymer-like CDs, which were then carbonized to form the CDs. The CDs were applied both as printing inks, which are capable of producing multicolor patterns on the microscale, and as functional nanocomposites that could potentially be used in anti-counterfeit applications. Furthermore, the CDs could be utilized as a biosensor reagent capable of detecting Fe<sup>3+</sup> in biosystems.

Keywords: carbon dot fluorescence biosensor bioimaging iron multicolor ink

View Source Full Text

CAS Method Number

1-119-CAS-256081

Method Category

Element Detection

Analyte

Iron

Matrix

Material

Quantum dots

Equipment Used

Autoclave

Instructions

Preparation of carbon dots (CDs)

CAS Methods Number をクリックすると CAS Analytical Methods で分析手法の詳細が確認できる

Substances

Analytical Methods

Title	CAS Method Number
Analysis of Iron by Dialysis	1-119-CAS-256081
Analysis of Quantum dots by Dialysis	2-107-CAS-109366



JAICI ヘルプデスク

Tel : 0120-003-462 (平日 9:00-17:00)

Mail : [support@jaici.or.jp](mailto:support@jaici.or.jp)

© 2024 American Chemical Society. All rights reserved.

