

Search &gt; Author Profile &gt; Selective extraction and enrichment of 5-hydroxymethylfurfural from honey,...



Full text at publisher



Export ▾

Add To Marked List

&lt; 1 of 1 &gt;

## Selective extraction and enrichment of 5-hydroxymethylfurfural from honey, molasses, jam and vinegar samples prior to sensitive determination by micro-volume UV-vis spectrophotometry

By: Bas, SD (Bas, S. Dagdeviren) [1], [2]; Gurkan, R (Gurkan, R.) [1], [3]

JOURNAL OF FOOD COMPOSITION AND ANALYSIS

### JOURNAL OF FOOD COMPOSITION AND ANALYSIS ×

#### Journal Impact Factor™

2020

Five Year

4.556

4.89

| JCR Category  | Category Rank | Category Quartile |
|---|---------------|-------------------|
| CHEMISTRY, APPLIED<br><i>in SCIE edition</i>        | 17/74         | Q1                |
| FOOD SCIENCE & TECHNOLOGY<br><i>in SCIE edition</i> | 30/143        | Q1                |

Source: Journal Citation Reports™ 2020

observed to be in range of 97.3-102.3 % and 2.5-3.8% (10, 25 and 75  $\mu\text{g L}^{-1}$ , n: 5). After validation, the method was applied to the analysis of the selected foods. From the results, it was observed that 5-HMF levels were in the range of 1.05-18.10  $\text{mg kg}^{-1}$  with a RSD% of 3.0-4.2 % and recovery of 95.5-98.0 % by sample extraction with sonication while they ranged from 1.15-18.05  $\text{mg kg}^{-1}$  with a RSD% of 3.0-4.2 % and recovery of 95-99 % without sonication. Finally, it was observed that the results obtained were in agreements with those of the modified White method, statistically validating the method.

#### Keywords

**Author Keywords:** UA-CPE; 5-HMF; Food analysis; Food composition; Phenosafranine; Micro-volume UV vis spectrophotometry

**Keywords Plus:** PERFORMANCE LIQUID-CHROMATOGRAPHY; SOLID-PHASE MICROEXTRACTION; CLOUD-POINT EXTRACTION; SODIUM DODECYL-SULFATE; FURANIC COMPOUNDS; QUANTIFICATION; COMPONENTS; SEPARATION; BEVERAGES; HPLC

#### Author Information

**Corresponding Address:** Gurkan, R. (corresponding author)

▼ Univ Cumhuriyet, Dept Chem, Fac Sci, TR-58140 Sivas, Turkey

## Citation Network

In Web of Science Core Collection

1

Citation

🔔 Create citation alert

1

Times Cited in All Databases

+ See more times cited

45

Cited References

View Related Records

#### You may also like...

Xu, YX; Sheng, KX; Shi, GQ; et al.

Self-Assembled Graphene Hydrogel via a One-Step Hydrothermal Process

ACS NANO

Didpinrum, P; Ponghong, K; Grudpan, K; et al.

A Cost-Effective Spectrophotometric Method Based on Enzymatic Analysis of Jackfruit Latex Peroxidase for the Determination of Carbaryl and Its Metabolite 1-Naphthol Residues in Organic and Chemical-Free Vegetables

FOOD ANALYTICAL METHODS

Kedzierska-Matysek, M; Florek, M; Litwinczuk, A; et al.

Characterisation of viscosity, colour, 5-hydroxymethylfurfural content and diastase activity in raw rape honey (Brassica napus) at different temperatures

JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE

da Silva, PAB; de Souza, GCS; Lavorante, AF; et al.

Synthesis and characterization of functionalized silica with 3,6-dithia-1,8-octanediol for the preconcentration and determination of lead in milk employing multicommuted flow system coupled to FAAS

JOURNAL OF FOOD COMPOSITION AND ANALYSIS



**Corresponding Address:** Gurkan, R. (corresponding author)

▼ Univ Cumhuriyet, Dept Chem, Fac Sci, Div Analyt Chem, TR-58140 Sivas, Turkey

**Addresses:**

▼ <sup>1</sup> Univ Cumhuriyet, Dept Chem, Fac Sci, TR-58140 Sivas, Turkey

▼ <sup>2</sup> Univ Cumhuriyet, Dept Chem, Fac Sci, Div Phys Chem, TR-58140 Sivas, Turkey

▼ <sup>3</sup> Univ Cumhuriyet, Dept Chem, Fac Sci, Div Analyt Chem, TR-58140 Sivas, Turkey

**E-mail Addresses:** [semahatzara@hotmail.com](mailto:semahatzara@hotmail.com); [rgurkan@cumhuriyet.edu.tr](mailto:rgurkan@cumhuriyet.edu.tr)

**Categories/Classification**

**Research Areas:** Chemistry; Food Science & Technology

**Funding**

| Funding agency                      | Grant number |
|-------------------------------------|--------------|
| Sivas Cumhuriyet University, Turkey | F-480        |

Funding Table

[View funding text](#)

+ [See more data fields](#)

Jimenez-Lopez, J; Ortega-Barrales, P; Ruiz-Medina, A;

[Determination of clothianidin in food products by using an automated system with photochemically induced fluorescence detection](#)

JOURNAL OF FOOD COMPOSITION AND ANALYSIS

[See all](#)

**Most Recently Cited by**

Shah, SN; Uzcan, F; Soylak, M;

[Ultrasound-assisted deep eutectic solvent microextraction procedure for traces Ponceau 4R in water and cosmetic samples](#)

INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY

**Journal information**

[JOURNAL OF FOOD COMPOSITION AND ANALYSIS](#)

ISSN: 0889-1575

eISSN: 1096-0481

**Current Publisher:** ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495

**Journal Impact Factor:** [Journal Citation Report™](#)

**Research Areas:** Chemistry; Food Science & Technology

**Web of Science Categories:** Chemistry, Applied; Food Science & Technology

**4.556**

**Journal Impact Factor™ (2020)**

**Use in Web of Science**

**Web of Science Usage Count**

**4**

Last 180 Days

**15**

Since 2013

[Learn more](#)

**This record is from:**

**Web of Science Core Collection**

- Science Citation Index Expanded (SCI-EXPANDED)

**Suggest a correction**

*If you would like to improve the quality of the data in this record, please [Suggest a correction](#)*

**45** Cited References

Showing 30 of 45

[View as set of results](#)

(from Web of Science Core Collection)



