

# Accepted Manuscript

Title: Modern solutions in the field of microextraction using liquid as a medium of extraction

Author: Justyna Płotka-Wasyłka, Katarzyna Owczarek, Jacek Namieśnik

PII: S0165-9936(16)30209-6

DOI: <http://dx.doi.org/doi: 10.1016/j.trac.2016.08.010>

Reference: TRAC 14815

To appear in: *Trends in Analytical Chemistry*



Please cite this article as: Justyna Płotka-Wasyłka, Katarzyna Owczarek, Jacek Namieśnik, Modern solutions in the field of microextraction using liquid as a medium of extraction, *Trends in Analytical Chemistry* (2016), <http://dx.doi.org/doi: 10.1016/j.trac.2016.08.010>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# 1 Modern solutions in the field of microextraction using liquid as a medium of extraction

2 Justyna Płotka-Wasyłka<sup>a</sup>, \* Katarzyna Owczarek, Jacek Namieśnik<sup>a</sup>

3

4 <sup>a</sup> Department of Analytical Chemistry, Faculty of Chemistry, Gdańsk University of  
5 Technology, 11/12 Narutowicza Street, 80-233 Gdansk, Poland

6 \*corresponding author: katarzyna.owczarek.90@gmail.com

## 7 Highlights

- 8 1. LPME is a solvent-minimized sample preparation procedure of LLE.
  - 9 2. LPME techniques can be coupled with such identification techniques as GC, HPLC, CE.
  - 10 3. The most popular techniques belonging to LPME are SDME, HF-LPME, DLLME.
  - 11 4. LPME techniques offers many advantages.
  - 12 5. LPME techniques are widely applied to samples with matrix complexity.
- 13
- 14

## 15 Abstract

16

17 The monitoring of compounds present in samples at trace/ultra-trace level usually  
18 requires a preliminary step of isolation and/or enrichment of analytes. Against, sample  
19 preparation is considered as crucial part of whole analytical procedures, in particular in  
20 samples characterized by complex matrices composition. Several new miniaturized extraction  
21 techniques is introduced and extensively applied to different type of samples. Here you can  
22 highlight solid phase microextraction (SPME) and liquid phase microextraction (LPME).  
23 **LPME was introduced to overcome drawbacks of liquid liquid extraction (LLE).** Based on the  
24 recently published literature data, this review provides an update of the most important  
25 features and application of LPME. Comparison of these techniques have been made.  
26 Moreover, application of different type of LPME techniques for the extraction of different  
27 kind of materials such as biological, environmental, pharmaceutical and food was  
28 summarized.

29

30 **Keywords:** Liquid phase microextraction; green analytical chemistry; single drop  
31 microextraction; hollow-fiber liquid phase microextraction; dispersive liquid-liquid  
32 microextraction

33

## 34 1. Introduction

35 Determination of target compounds in representative samples of materials, especially  
36 these characterized by complex composition of the matrix is not an easy task. Suitable  
37 procedures includes many steps, which most important are sample preparation which may

Download English Version:

<https://daneshyari.com/en/article/5141701>

Download Persian Version:

<https://daneshyari.com/article/5141701>

[Daneshyari.com](https://daneshyari.com)