

# FRUIT PROCESSING

[www.fruit-processing.com](http://www.fruit-processing.com)



Analytics

Cider

Fining Agents

New Product Launches

Market Price Report

Process Technology

SEPTEMBER

9/2017

INTERNATIONAL JOURNAL FOR THE FRUIT PROCESSING, JUICE AND SOFT DRINKS PRODUCING INDUSTRY



## Cider – An apple (drink) a day...

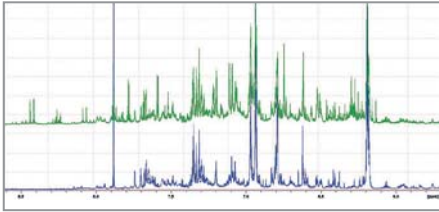
How GEA helps cider manufacturers equip new and existing systems for the latest beverage trend

read more on p. 328

### ANALYTICS

Dr Nicole Lehnert, Mirjam Schmidt, Dr Victor Ara

#### Authenticity proof of lemon juices by means of fingerprint methods . . . . . 314



The adulteration of lemon juices and lemon juice concentrates is still a topic. Laboratories face the challenge of verifying and confirming the authenticity of juices and concentrates. In recent years, we analyzed customer and market samples. Through observation, we found out that the adulteration of lemon juices and lemon juice concentrates with lime proportion is still a current topic. Often, the evaluation by laboratories is not consistent so that there are several interpretation

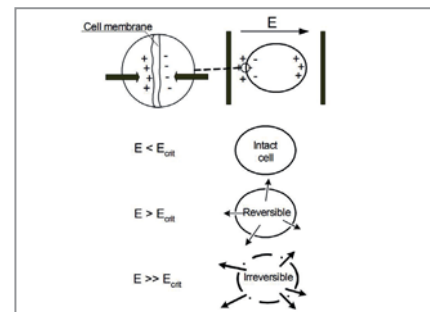
possibilities. This article is intended to clarify this issue. In addition, results of nuclear magnetic resonance spectroscopic analyses (NMR) of extracts will be presented ...

### PROCESS TECHNOLOGY

Michael A. Kempkes

#### Pulsed Electric Field (PEF) processing of fruit and vegetables . . . . . 320

Pulsed Electric Field (PEF) processing is an exciting new tool for food processors, with a range of potential applications, which can save time, energy, and money over conventional processes, such as slicing, extraction, and drying. PEF uses short, high voltage pulses to open (electroporate) membranes in cells – whether they are microbes, plant cells, or even animal tissue. Compared to conventional techniques, PEF uses very little energy or time, creating a number of new opportunities for food processing, and significantly lowers the costs of slicing, drying, and extraction, with minimal impact on the food itself. ...



### IMPRINT

#### Publisher

Evi BRENNICH

#### Editorial Office

Editor-in-Chief: Evi BRENNICH  
editorial@fruit-processing.com

Editor: Marco BRENNICH

marco.brennich@fruit-processing.com

#### Advertising

Cornelia HEBBE  
cornelia.hebbe@fruit-processing.com

#### Advertisement Rates:

Current price list 2017 on request and at  
www.fruit-processing.com

#### Readers' Service

Christian FRIEDEL  
christian.friedel@fruit-processing.com

#### Subscription Rate (print)

Europe: EUR 115 incl. mailing cost  
Overseas: EUR 124 incl. mailing cost

**Cancellation:** Written notice one month prior to the end of the subscription period.

#### Layout

confructa medien GmbH  
D-56587 Oberhonnefeld, Germany

#### Address for all Communications:

confructa medien GmbH  
FRUIT PROCESSING  
Westerwaldstrasse 2a  
D-56587 Oberhonnefeld, Germany  
phone: +49 (0)2634 9235-0  
fax: +49 (0)2634 9235-35  
editorial@fruit-processing.com  
www.fruit-processing.com

Ownership structure of the shareholders in accordance with  
Pressegesetz Rheinland-Pfalz:

Evi Brennich 51 %, Guido Hoffmann 26 %, Lothar Hoffmann 14 %, Hubert Brennich 9 %;  
Managing Partner: Evi Brennich; HRB 14556 Montabaur

#### Printed by:

mohr medien GmbH, Metastraße 3, D-56579

#### Note:

The views and opinions expressed by the authors do not necessarily reflect those of the publisher or the editorial staff.

Original science and research papers will be presented for scrutiny to a member of the Peer Review Board. All manuscripts must be written in English. If English is not the author's primary language, the author should obtain assistance.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the written permission of the publisher.

**FRUIT** is read in over 115 countries by more than 30,000 readers per issue.

Publication frequency (print/digital): monthly

© Copyright 2017 confructa medien GmbH, Westerwaldstrasse 2a, D-56587 Oberhonnefeld, Germany

ISSN 0939-4435,  
Printed in Germany

**FINING AGENTS**

*Dr Ilona Schneider, Philipp Schwabe*

**Vegan turns colorful! . . . . . 324**

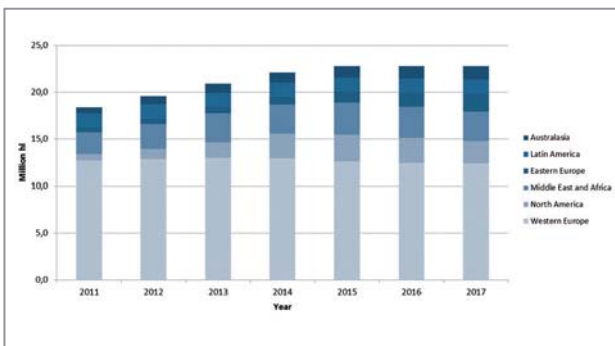
Juices are highly popular. Year after year, juices are extracted from a wide variety of fruits and vegetables and brought to market. It is up to the consumers to decide whether they prefer naturally cloudy or clear juices. For those who decide on clear juices, it may also be important (for health, ethical, or religious reasons) that the juices are manufactured without the use of animal additives, such as gelatin. Until recently, due to the high degree of turbidity in red fruit juices such as sour cherry and black currant, clarification and stabilization could only be achieved with an increased dose of fining agents, and ideally by adding gelatin. Thanks to the combination of plant proteins (as a substitute for gelatin) that are permitted food additives<sup>[1]</sup> pursuant to the German Fruit Juice and Soft Drink Directive (Fr-SaftErfrischGetrV) and a balanced filtration process, even colored vegan juices can now be produced ...



**CIDER**

*Torben Bauch*

**Cider – An apple (drink) a day.... . 328**



Cider, cidre, sidra – with and without alcohol, gentle and sweet or sharp and crisp, pure apple or with other fruity aromas – brewed by small craft producers or in large-scale facilities: The fermented apple drink is as varied as its name, and now everyone is talking about the one of the world’s most dynamic growth markets for alcoholic beverages. Especially Eastern Europeans, Australians and South Africans are growing ever fonder of the beverage and are catching up with the traditional markets of the United Kingdom, Ireland, France and North America ...

**REGULAR SECTIONS**

**Editorial . . . . . 311**  
**Imprint . . . . . 312**  
**Peer Review Board . . . . . 318**  
**Business News . . . . . 336**  
**Business Contacts . . . . . 339**  
**Market Price Report . . . . . 340**  
**World of Fruit Processing . . . . . 343**

