



Prof. Dr. Gertrud Morlock  
JLU Giessen, Germany

The adage "A picture is worth a thousand words" ideally refers to the image-giving planar chromatographic method for the evaluation of samples. In this case study, an HPTLC method for analysis of steviol glycosides with its single steps was visualized in a short video recorded at the JLU Giessen, Germany. Only sugar-containing analytes, and so the steviol glycosides, were detected in separated raw extracts, *Stevia* formulations, or sugar-free food products using a selective derivatization with the  $\beta$ -naphthol reagent. Coupling to mass spectrometry was employed for confirmation of the identity. The workflow of the method can be conveyed more effectively as a visualized experiment than as a pure description. Enjoy the video and agree with the updated adage "A video is worth a thousand words".

## News & Events

### EXPOFARMA 2015

15–17 April 2015, Mexico City, Mexico  
CAMAG will exhibit at the EXPOFARMA 2015 that will take place at the World Trade Center, Mexico City.

### TLC-MS Users Meeting 2015

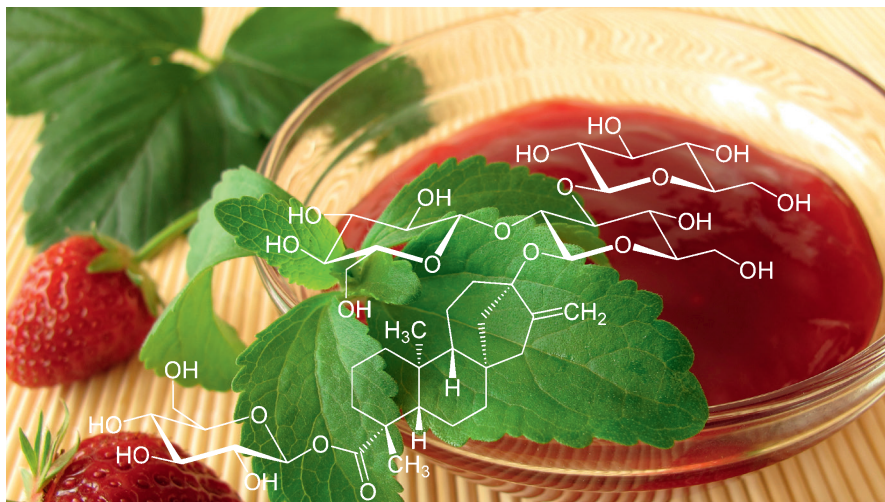
6 May 2015, Darmstadt, Germany  
CAMAG will exhibit at the TLC-MS Users Meeting 2015 that will be held in the premises of Merck KGaA. Please note that this meeting is being held in German language.

### 63rd ASMS Conference on Mass Spectrometry and Allied Topics

31 May–4 June 2015, St. Louis, USA  
CAMAG exhibits at the 63rd ASMS Conference on Mass Spectrometry and Allied Topics that will take place at the America's Center in St. Louis.

MARCH 2015

## Case Study: Quantitative determination of steviol glycosides



A current topic of public discussion is obesity that is also seen in developing countries. The daily consumption of carbohydrates, particularly sugar has been correlated with this problem. Low or zero-calorie sweeteners have therefore become increasingly popular.

For centuries South American natives have used the plant *Stevia rebaudiana* to sweeten food and traditional medicines. The isolated diterpene sweeteners, so-called steviol glycosides, are about 200–300 times sweeter than sugar. Such purified *Stevia* extracts have been added to beverages and food or approved for its use in countries like Japan and China already for decades.

Positive safety opinions of the US Food and Drug Administration (FDA), European Food Safety Authority (EFSA) or the Joint FAO/WHO Expert Committee on Food Additives (JECFA) on the safe use of purified *Stevia* leaf extracts as food additive and sweetener in food and beverages have increasingly launched products containing steviol glycosides. In December 2011,

steviol glycosides have been permitted as sweetener E 960 in the EU. Expressed as steviol equivalents, a daily intake of up to 4 mg/kg body weight was specified as acceptable.

CAMAG has released a case study that demonstrates a rapid characterization of *Stevia* formulations, *Stevia* raw extracts, or sugar-free food products by a selective derivatization of the steviol glycosides. Additionally, it shows the concept of confirming the identity of the different steviol glycosides by coupling with mass spectrometry. Relevant mass spectra of steviol glycosides were recorded in the positive ion mode in few minutes.

To view the entire case study and the complementary application video tutorial, simply scan the following QR-Code with your smartphone or visit [www.camag.com/en/stevia.cfm](http://www.camag.com/en/stevia.cfm).

