

## New Methods of Analysis



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Because of the introduction of sundry technical equipment the development of analytical chemistry received a hardly reproduceable impetus during the last 20 years. Especially chromatographical producers like gas-chromatography (GC) and high performance liquid chromatography (HPLC) revolutionized the analytic in those days. Due to this fact detection limits within ppb field are not seldom and a relevant judgement - most of all concerning the pesticides would not be possible.

This fast development also occurred in the fruit-juice-analytic for years. Besides toxic substances, like heavy metals or pesticides, patulin or thiabendazol are a central point of consideration for some years. Since these residues come very often into the limelight it has to be supposed that this field will become more important in the future.

The analytic which leads to the detection of adulteration is very important. It is like playing "cops and robbers". Very often it was successful to be in advance of adulterators. Unfortunately this advantage was always lost very quickly, for example D-amino acids, D-malic acid or the so called LOW-method. It must be suspected that

this case will also happen for the isotopic-determination.

However the call for the "new method" is always lasting. Unfortunately it is often disregarded that establishing a "new method" requires a great period of time until it can be accepted as really tested.

Hasty judgments are often made although the one or the other is still not prepared methodically - this is a real problem nowadays - and there is not enough knowledge referring to the "new method". Therefore, using a "new method", it is necessary to have sufficient data material which takes the nature into account. Nowadays the analytic is not the problem but the question is: what do the results mean?

The dilemma becomes clear for example using different "fingerprint techniques". Here, no more single-compounds are registered but the totality of information based on one method. This way you have a lot of data per sample which cannot be registered anymore without a computer and the judgment is not possible without pattern recognition.

There is no doubt that these techniques will be used in future but on the other hand it has to be warned. Last but

not least a result and/or judgment must be reproducible for other people and the truth has to stand a scientific test.

Efforts to validate such methods with suitable ring-tests often fail, because different labs have different results in spite of using the same methods. It is a misunderstanding of details.

It would be desirable not to heighten the development so quickly. During the last few years it appeared afterwards that "new methods" often became "flops". A little bit more self-criticism to the statement of a "new method" would be desirable. A more intensive exchange of views and a better cooperation between the analysts may surely lead to a better efficiency.

Yours,

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