AOAC會員通訊

55期

2020/9

PREPARED BY
AOAC TAIWAN

進階質譜應用於食品安全與品質管制課程

師生談

感謝所有熱情參與的會員，也謝謝張守元老師的精采課程

一場好的課程，除了擁有優秀的老師，認真的學生外，最重要的是師生之間的交流，熱烈的討論，除了得知學生對課程的疑問外，也讓老師看到不同面向的問題。本次進階質譜應用於食品安全與品質管制課程已於6月份，隨著鳳凰花開的日子，進入了尾聲，很感謝守元老師在這一學期，分享給學生與會員，他在美國工作期間，所獲得的質譜相關知識。本會節錄一些課堂相關的互動與問題，給無法參與這次課程的會員，希望讓各位會員能在課程後，仍能有小小的參與:

學生A:
老師好，關於S/N ratio的計算，學生本身是QE的User，有時候使用Xcalibur計算S/N ratio時 (Peak algorithm為ICIS)，會無法計算出S/N ratio，會顯示INF或是NA。INF學生推論為由於Noise level相當低(接近0)，目標訊號level相當高，因此計算上造成無限大的情況，那如果是NA的話，可能的原因為何呢?

張守元 老師:
Due to the high resolution and the selectivity is great, therefore it may give the infinite as the result of S/N ratio. I don't remember so see the NA as the result, if possible please catch the screen and send it to me. Thanks

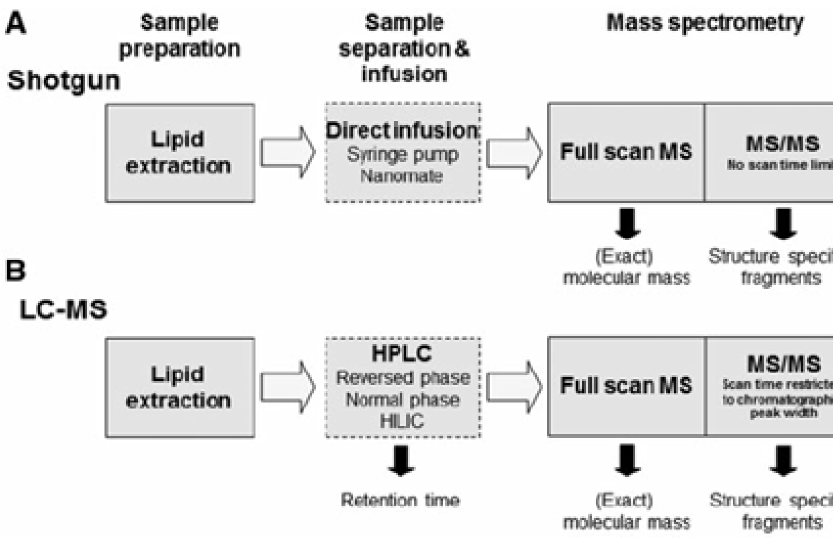
學生B:
老師您好，我想請問AIF、DIA跟DDMS2的掃描點數的問題。在使用AIF的時候，質譜需要掃描各個質量範圍的分子，可是他的掃描點數卻是最多的。但換到DDMS2的時候，質譜只需針對輸入的質量進行掃描，可是所得到的點數卻是最少的。這之間的差異是因為DDMS2需要不斷的切換掃描的模式所造成的嗎？還是有其他的原因呢？
張守元 老師:
The full scan and AIF scan will take turns by design, and it has the most scan cross the peak. However, the MS2 is only for confirmation and doesn't need all cross the peak. Again, AIF has the east sensitivity on MS2 and you need to have much higher concentration to see the production ions (in general 50 ppb and above). On the other hand DDMS2 may get down to 0.01 ppb for your product ions. All 3 mode (AIF, DDMS2 and DIA) will provide product ion information and the difference is sensitivity.

進階質譜應用於食品安全與品質管制課程

師生談

感謝所有熱情參與的會員，也謝謝張守元老師的精采課程

學生C:
it also called flow injection analysis, 基本上是利用質譜 intensity 做定量, 但考量到 isomer 或靈敏度的問題 (以及QSRR), 我還是偏好使用LC-MS 勝過 FIA-MS



張守元 老師:
The problem with shotgun approach depends on the matrix effect or so call ion suppression which I mentioned at the first day of the class. I had publication on root cause of ion suppression on ESI. If the matrix dominate in your sample then you may not see your target compound if it in a very small concentration. If your target compound concentration is high enough then shotgun approach will be fine. Still, the higher the resolution the better the result for your shotgun approach. On the other hand, LC will provide a good separation and has less chance for ion suppression compared to flow injection. For trace analysis, the flow injection will not work due to matrix interference. If you know the DART (Direct Analysis in Real Time), which is similar to flow injection except you can run sample directly. USFDA bought sever DARTs for quick analysis on import food to US and wanted me to set method for them. I demonstrated to them that DART is not good enough and validated the quick screening method by using UHPLC/QE instead of DART/QE.

AOAC美國線上總會

2020 ANNUAL MEETING & EXPOSITION: BUILDING THE FUTURE OF ANALYTICAL SCIENCE

因受全球疫情影響，故2020年度美國AOAC改採線上會議的方式，讓全球會員不再受制於旅費及時間，能於線上參與會議。本次會議將於9/8(二)展開，如有興趣的會員，雖然沒有註冊截止日期，但AOAC建議您在2020年9月2日之前註冊。

報名費

AOAC會員：199美元\非會員：$ 279 USD\學生：$ 99 USD（包括1年AOAC學生會員資格）

詳細情形:請參考網頁

https://www.aoac.org/annual-meeting-exposition/2020-annual-meeting-exposition/2020-annual-meeting-registration/

議程

日期	時間	內容
2020/9/8(二)	9:00am-12:00 pm 2:00-4:00 pm	Analytical Solutions Forum, Part 1
2020/9/9(三)	9:00am-12:00 pm 2:00-4:00 pm	Analytical Solutions Forum, Part 2
2020/9/10(四)	11:00am-3:00pm	Food Authenticity Methods
	2:00-5:00pm	SPIFAN Meeting
	5:00-6:30pm	New Member and First-Time Attendee Welcoming Reception & Orientation, Sponsored by Abbott
2020/9/11(五)	10:00am-1:00pm	Working Group on Rosins
	1:00-5:00pm	CASP Meeting
2020/9/14(一)	10:00am-1:00pm	Working Group on Rosins
	1:00-5:00pm	CASP Meeting
	0:00-11:30am	Keynote Address, presented by Gilles Martin, Eurofins Scientific; Awards Ceremony The future is bright for the next generation of AOAC scientists and leaders
	1:00-1:30pm	Wiley Award Address, presented by Harvey Indyk, Fonterra Co-operative Group Ltd. and David Woollard, Independent Consultant
	1:30-3:00pm	Wiley Award Symposium: Food Analysis in Aotearoa
	3:30-5:30pm	Board of Directors Meeting
2020/9/15(二)	0:00-11:30am	Establishing Standards for Color Additives from Natural Sources
	10:00-11:30am	Botanical Identification Goes Mobile
	11:30am-12:15pm	Networking Break, Sponsored by Herbalife Nutrition
	1:00-2:30pm	Tools for Quality Assurance of Quantitative PCR for Microbiological Method
	1:00-2:30pm	Seafood Decomposition: Sensory and Chemical Test Methods

AOAC美國線上總會

2020 ANNUAL MEETING & EXPOSITION: BUILDING THE FUTURE OF ANALYTICAL SCIENCE

議程

日期	時間	內容
2020/9/16(三)	10:00-11:30am	Quality by Design (QbD) in Analytical Method Development: Sample Preparation Challenges and Solutions
	10:00-11:30am	Hot Topic Symposium – Tattoo Inks: Regulatory and Analytical Perspectives
	1:00-2:30pm	The Power of High Resolution Mass Spectrometry – The "Leatherman" in Analytics
	1:00-2:30pm	Probiotics Identification and Quantitation
	3:00-4:00pm	AOAC Business Meeting
2020/9/17(四)	10:00-11:30am	Elemental Analysis in Food, Beverages, and Cannabinoids as Markers for Food-Safety
	10:00-11:30am	Project Launch to Develop Consensus Standards for Glyphosate and Glyphosate Metabolites: Addressing Method Gaps in Food Matrices
	1:00-2:30pm	Working Groups, Expert Review Panels and Method Validation: The Role of Reference Materials in the AOAC Process
	1:00-2:30pm	Novel Methods for Contaminants
	2:30-3:30pm	TDRM Reception, Sponsored by MilliporeSigma and FONA International Inc.
2020/9/18(五)	10:00-11:30am	Ergot Alkaloids: Analytical Considerations for Up and Coming Regulated Mycotoxins
	10:00-11:30am	What is the Problem for PCR Quantification? A Solution and New Application
2020/9/21(一)	10:00-11:30am	Methods for the Determination of PFAS by Federal Agencies
	10:00-11:30am	Analytical Characterization of Dietary Supplements for Public Health Research
	1:00-2:30pm	International Approaches to Tackle Food Fraud
	1:00-2:30pm	Analytical Strategies to Characterize Products Intended for Inhalation after High-Temperature Vaporization
2020/9/22(二)	10:00-11:30am	Challenges in Setting Probiotic Quality Standards
	10:00 – 10:30am	AOAC Spotlight On...
		Dustin Starkey, Abbott: Inspiring the Next Generation of Analytical Food Scientists – Helping AOAC Make a Positive Impact
	10:30 – 11:00am	AOAC Spotlight On...
		Samuel Benrejeb Godefroy, Université Laval: Setting a Structured Food and Feed Laboratory Testing Capacity in the Arab Region
	11:00 – 11:30am	AOAC Spotlight On...
		Mark Corey, National Coffee Association and Dawn Frazier, AOAC
	1:00-2:30pm	Novel Methods for Cannabis and Botanicals
	1:00-2:30pm	Beyond Presence and Absence: How Innovative Technology, such as MALDI-TOF and NGS, are Rewriting Industry's Data Needs
2020/9/24(三)	10:00-11:30am	Good Food, Beverages and Chemometrics
	10:00-11:30am	The Landscape of CBD/Hemp Testing: Ensuring Harmonization of Standards and Methods from Seed to Sale
	1:00-2:30pm	Salmonella Re-Emergence: What are the Plans for Better Control?
	1:00-2:30pm	Food Allergen and Gluten Analysis on the Fly
2020/9/25(四)	10:00-11:30am	AOAC/Eurofins Foundation "Testing for Life" Student Award Symposium
	1:00-2:30pm	Hot Topic Symposium: Food and Food Contact Surface Testing in the Era of COVID19
	2:30-2:45pm	Annual Meeting Closing Announcements

WE NEED PARTICIPANT

2020 食品暨藥物分析研討會

現正開放報名

活動日期: 109年10月24日 (週六)
報名截止日：109年10月12日

活動地點: 臺灣大學凝態科學研究中心
(台北市大安區羅斯福路四段一號)