New method filters for improved MS\textsuperscript{n} acquisition for small molecule and proteomics workflows

Graeme McAlister, Joanna Ntai, Rieko Kiyonami, Romain Huguet, Caroline Ding, Iman Mohtashami, Derek Bailey, Shannon Eiluk, Vlad Zabrouskov, Seema Sharma, Thermo Fisher Scientific, San Jose, CA

ABSTRACT

Precursor ion exclusion (PIE) is a new filtering capability of the Thermo Scientific™ Orbitrap™ method editor software, which directs the instrument to effectively collect more meaningful and informative MS\textsuperscript{n} scans in a manner that might infringe the intellectual property rights of others.

INTRODUCTION

MS\textsuperscript{n} w/ AcquireX

RESULTS

AcquireX efficiently collects MS\textsuperscript{n} spectra to a greater depth than DDA

AcquireX workflow was tested on a commercially available human plasma sample (NIST SRM 999C) and a complex Tandem Mass Tag (TMT) labeled peptide sample.

MATERIALS AND METHODS

RESULTS

AcquireX avoids collecting replicate MS\textsuperscript{n} scans of the same ion, and during the time the method collected unique ions from precursor to precursor analysis, it reacquired and reanalyzed all the unique ions collected during the previous "Deep Scan" analysis.

Figure 6. Following an "ID" run the instrument can trigger MS\textsuperscript{n} scans on a given precursor ion, while MS\textsuperscript{n} Quality Trigger provides specific guidelines to the instrument for when it should trigger complementary ITMS\textsuperscript{n} scans if the corresponding FTMS\textsuperscript{n} S/N drops too low.

OTHER APPLICATIONS OF THESE NEW FILTERS

CONCLUSIONS

AcquireX allows the user to respond to dynamic ion information, while reacquiring or resampling MS\textsuperscript{n} data to provide the highest possible data quality.

REFERENCES


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TRADEMARKS/ LICENSING

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