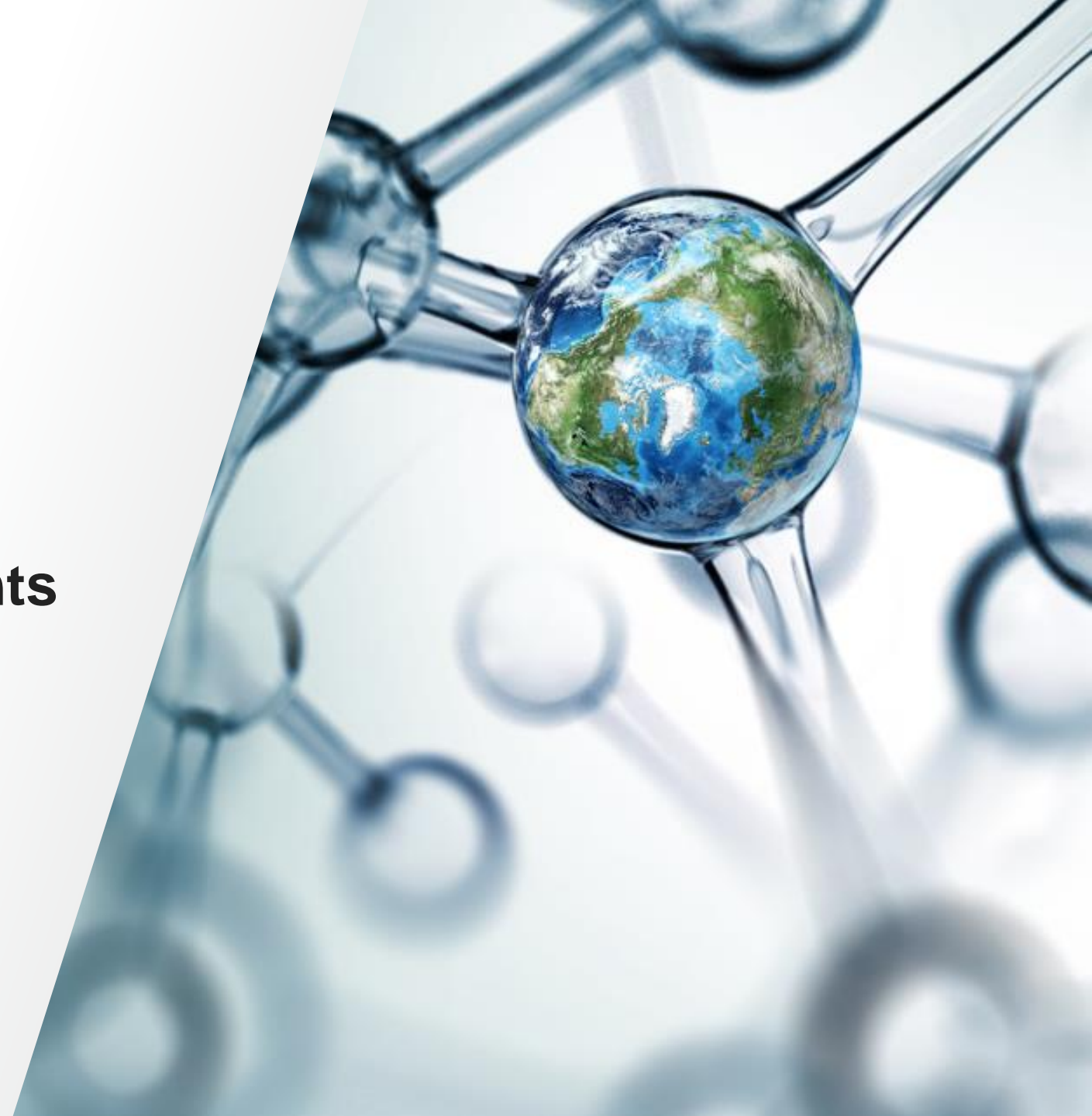


Introducing new 32plex reagents

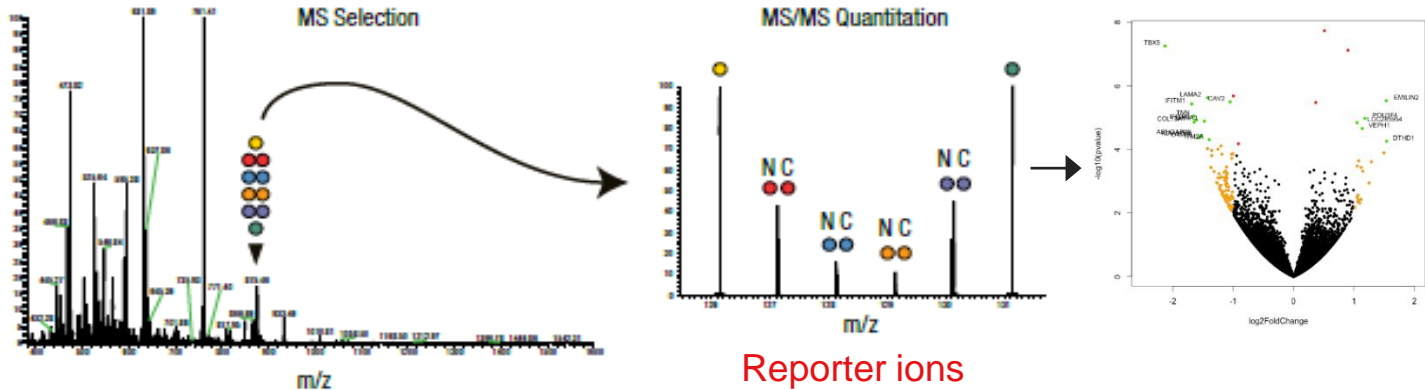
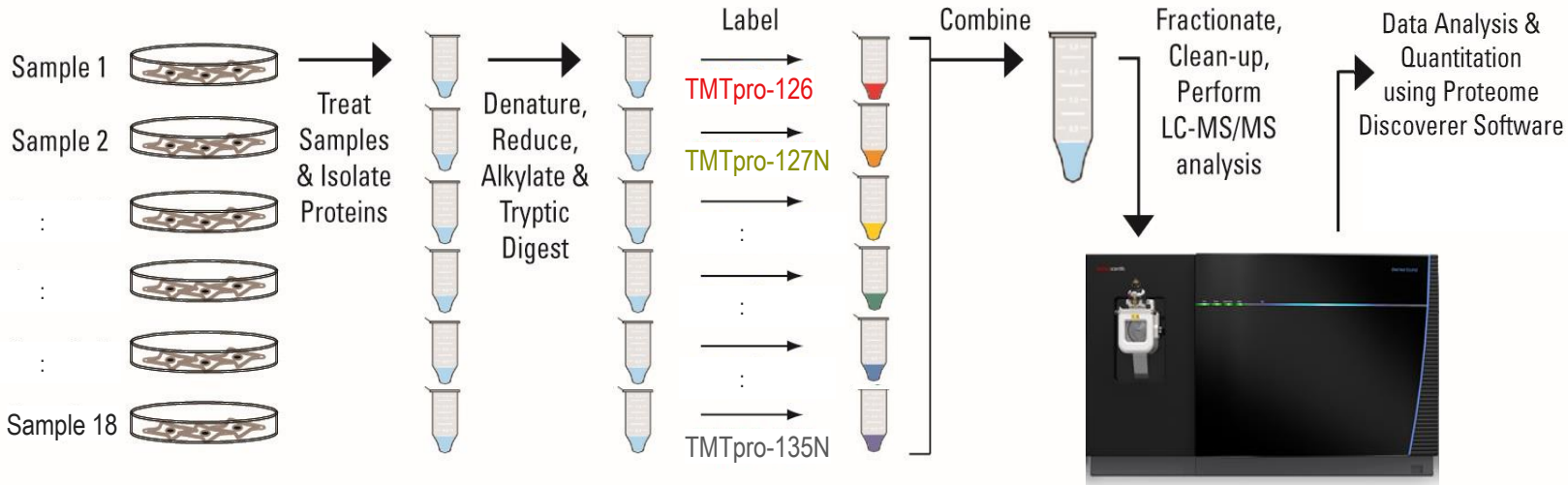
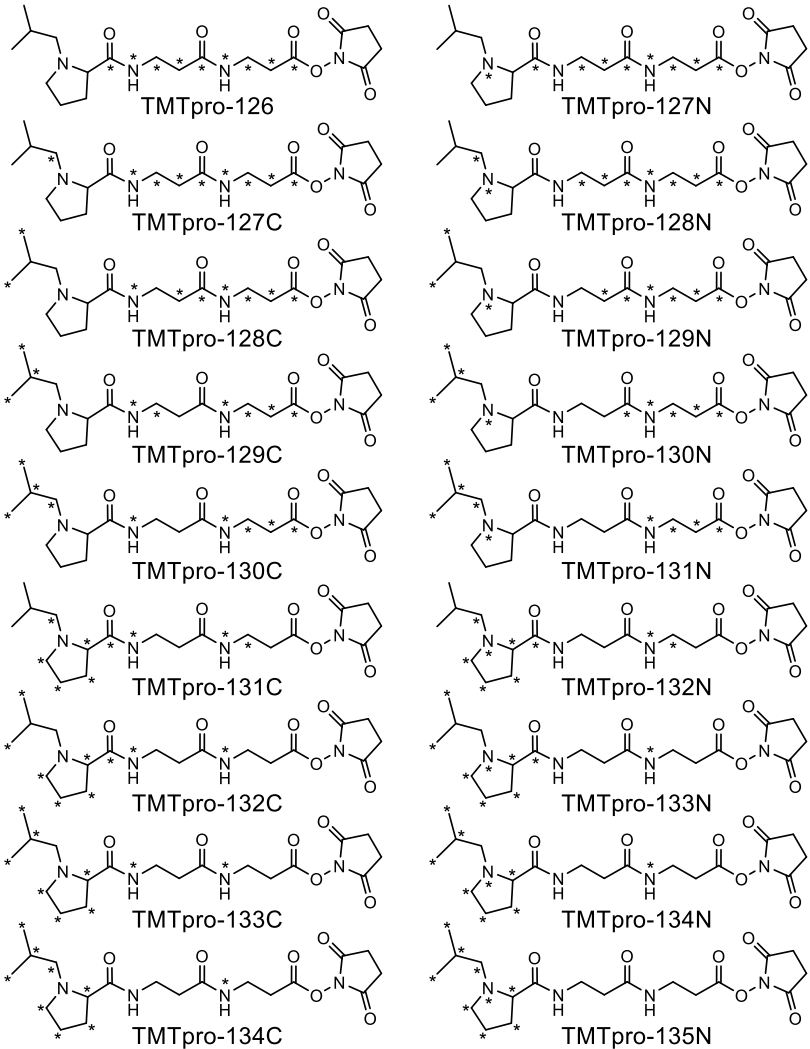
Ryan Bomgarden, Ph.D.

Sr. R&D Manager
Chemistry & Mass Spectrometry Reagents

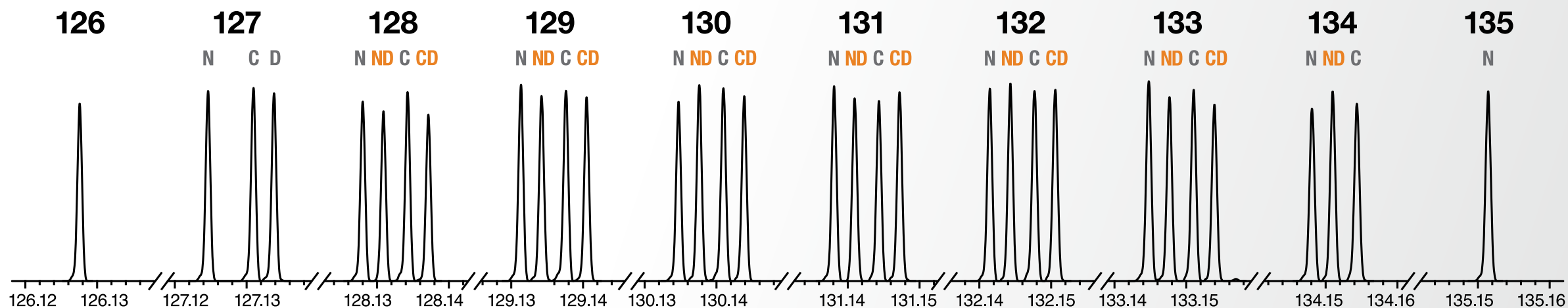
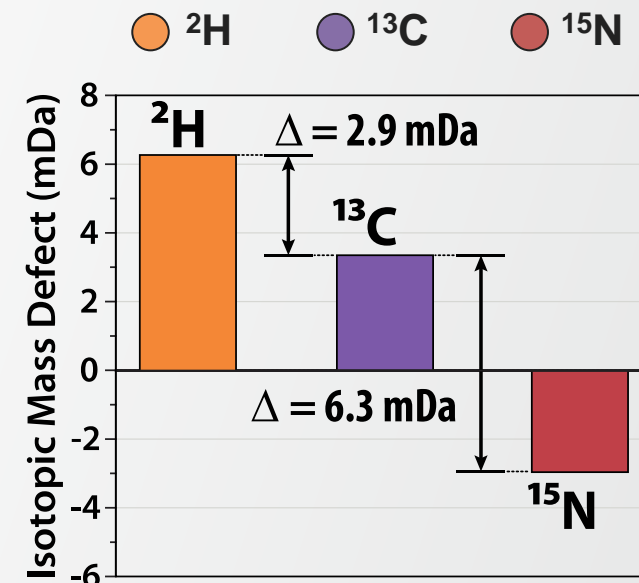
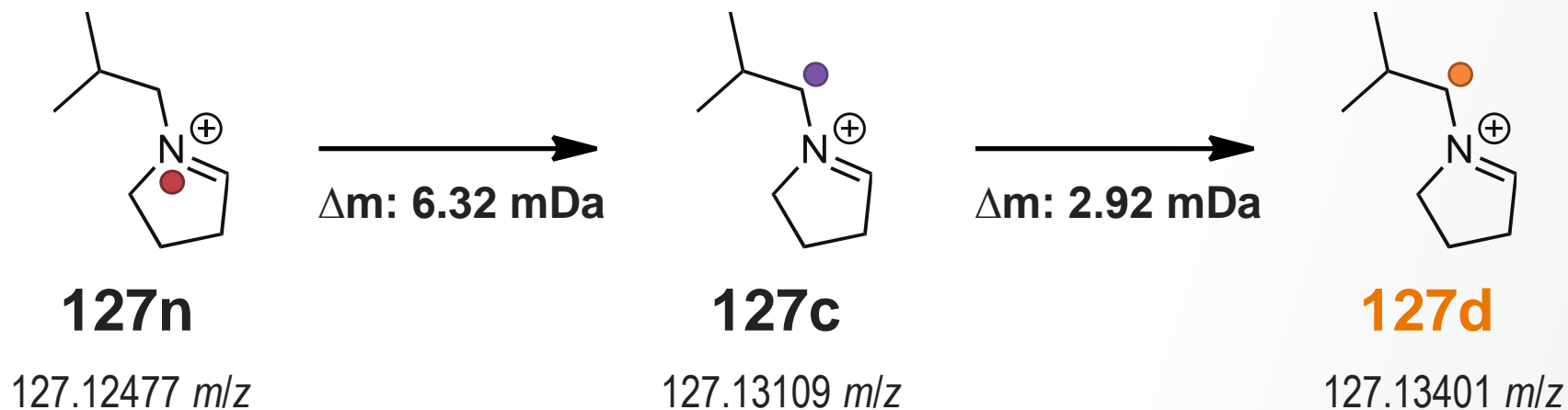
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Thermo Scientific™ TMTpro 18plex reagent workflow



Deuterated TMTpro tags expand sample multiplexing



TMTpro 32plex reagent set with 35plex potential

TMTpro 18-plex tags

Tag ID	CHN	Reporter Mass
126	000	126.12773 Da
127n	001	127.12477 Da
127c	100	127.13109 Da
128n	101	128.12812 Da
128c	200	128.13444 Da
129n	201	129.13148 Da
129c	300	129.13780 Da
130n	301	130.13483 Da
130c	400	130.14115 Da
131n	401	131.13819 Da
131c	500	131.14451 Da
132n	501	132.14154 Da
132c	600	132.14786 Da
133n	601	133.14490 Da
133c	700	133.15122 Da
134n	701	134.14825 Da
134c	800	134.15457 Da
135n	801	135.15161 Da

TMTproD 17-plex tags

Tag ID	CHN	Reporter Mass
127d	010	127.13401 Da
128nd	011	128.13105 Da
128cd	110	128.13737 Da
129nd	111	129.13440 Da
129cd	210	129.14072 Da
130nd	211	130.13776 Da
130cd	310	130.14408 Da
131nd	311	131.14111 Da
131cd	410	131.14743 Da
132nd	411	132.14447 Da
132cd	510	132.15079 Da
133nd	511	133.14782 Da
133cd	610	133.15414 Da
134nd	611	134.15118 Da
134cd	710	134.15750 Da
135nd	711	135.15453 Da
135cd	810	135.16085 Da

- TMTpro 32plex reagents combine new 16plex deuterated tag set with original non-deuterated 16plex reagents
- Incorporation of deuterium in reporter group uses existing synthetic routes with ^2H -labeled reducing agent
- ^2H reporter ions Δm : +2.92 mDa from ^{13}C reporter ions
- FT-MS²/MS³: $\geq 75\text{K}$ or TurboTMT $\geq 45\text{K}$ resolution required to resolve reporter ions

Tag	Tag mass	Δm
TMTpro 16-plex	419.2341	304.2071
TMTproD 14-plex	419.2370	304.2101 (+2.9 mDa)
TMTpro 134c/135n	419.2404	304.2135 (+6.3 mDa)
TMTpro-134CD/135ND	419.2433	304.2164 (+9.2 mDa)
TMTpro-135CD	419.2496	304.2227 (+15.6 mDa)