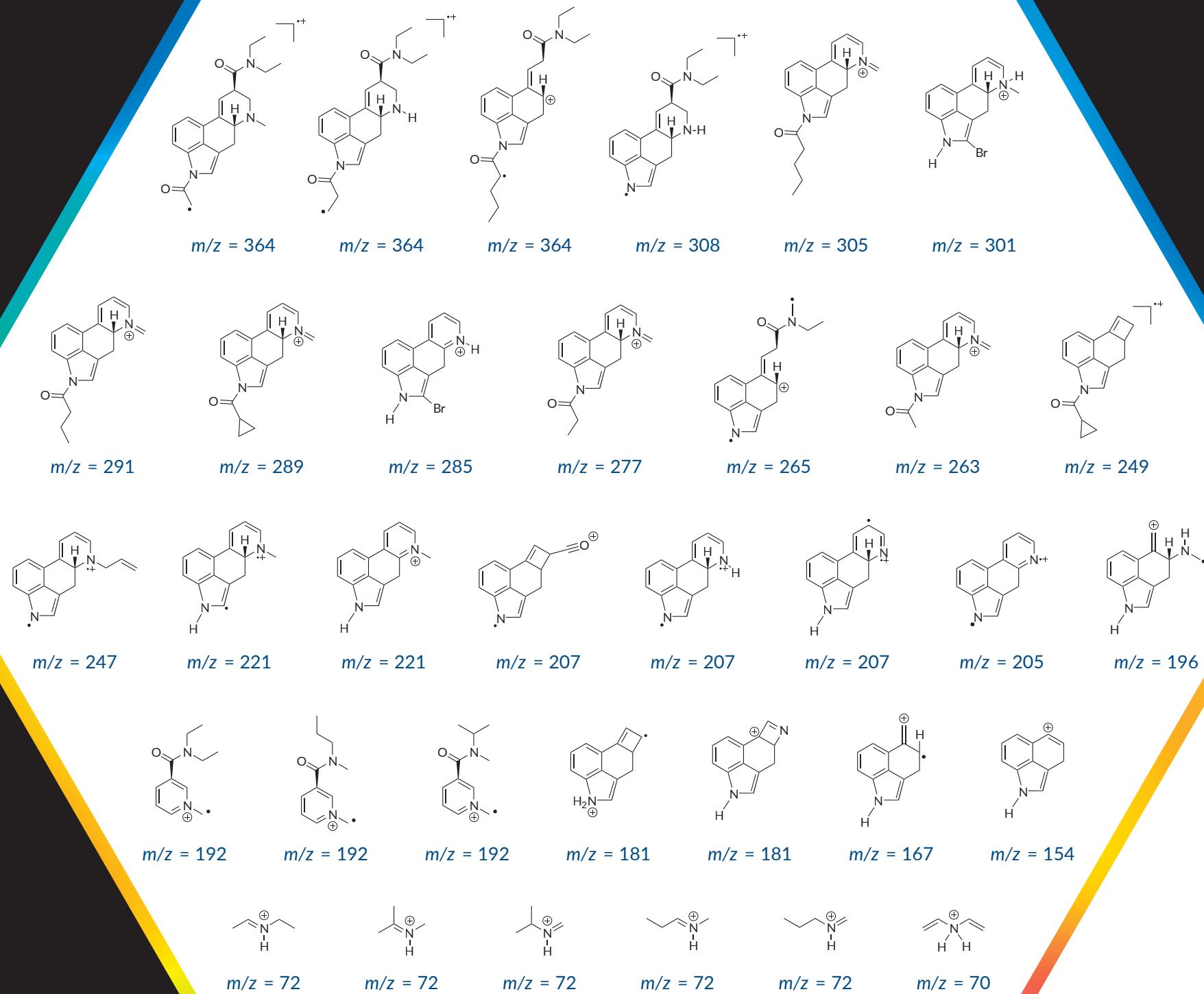


Laboratory Guide for LYSERGAMIDE Identification and Naming

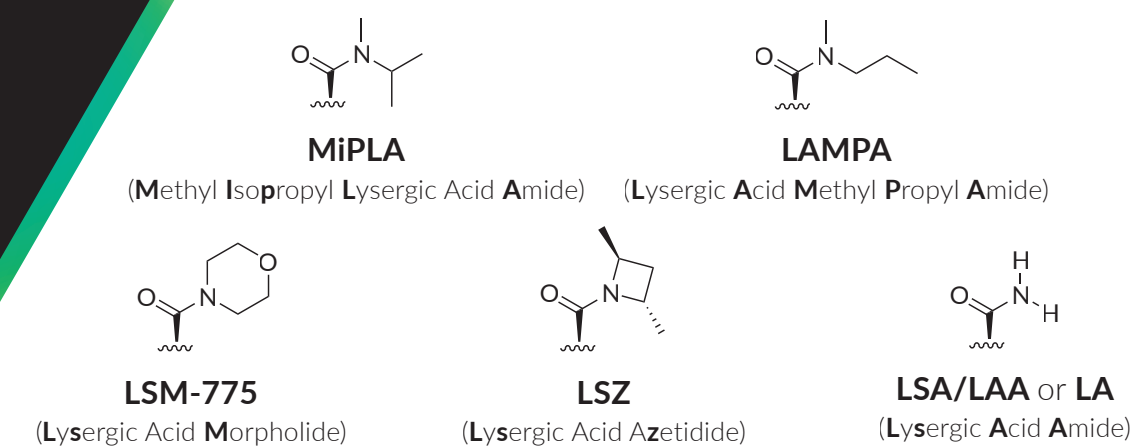
Common Lysergamide MS Fragments



Common Substitutions

Lysergamides are classified as tetracyclic ergoline molecules where variations typically occur at three main regions within the tetracyclic scaffold (see below). For LSD, R = H, R¹ = CH₃, and R² and R³ = CH₂CH₃. LSD analogs have a variety of R, R¹, R², and R³ groups. Here are some common lysergamides and how their names are derived.

1. Amide N¹⁸ Substitutions:

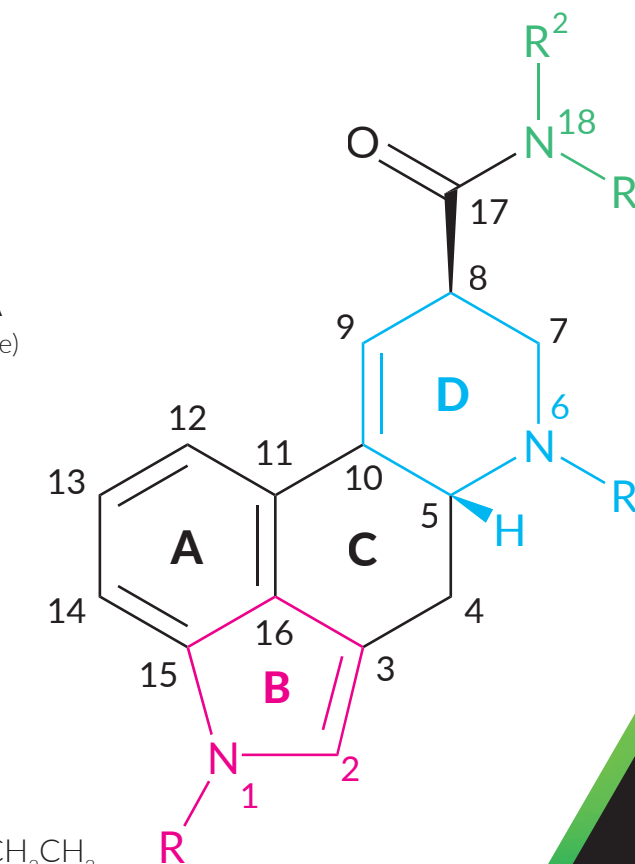


2. Ring (D) Substitutions at N⁶ position:

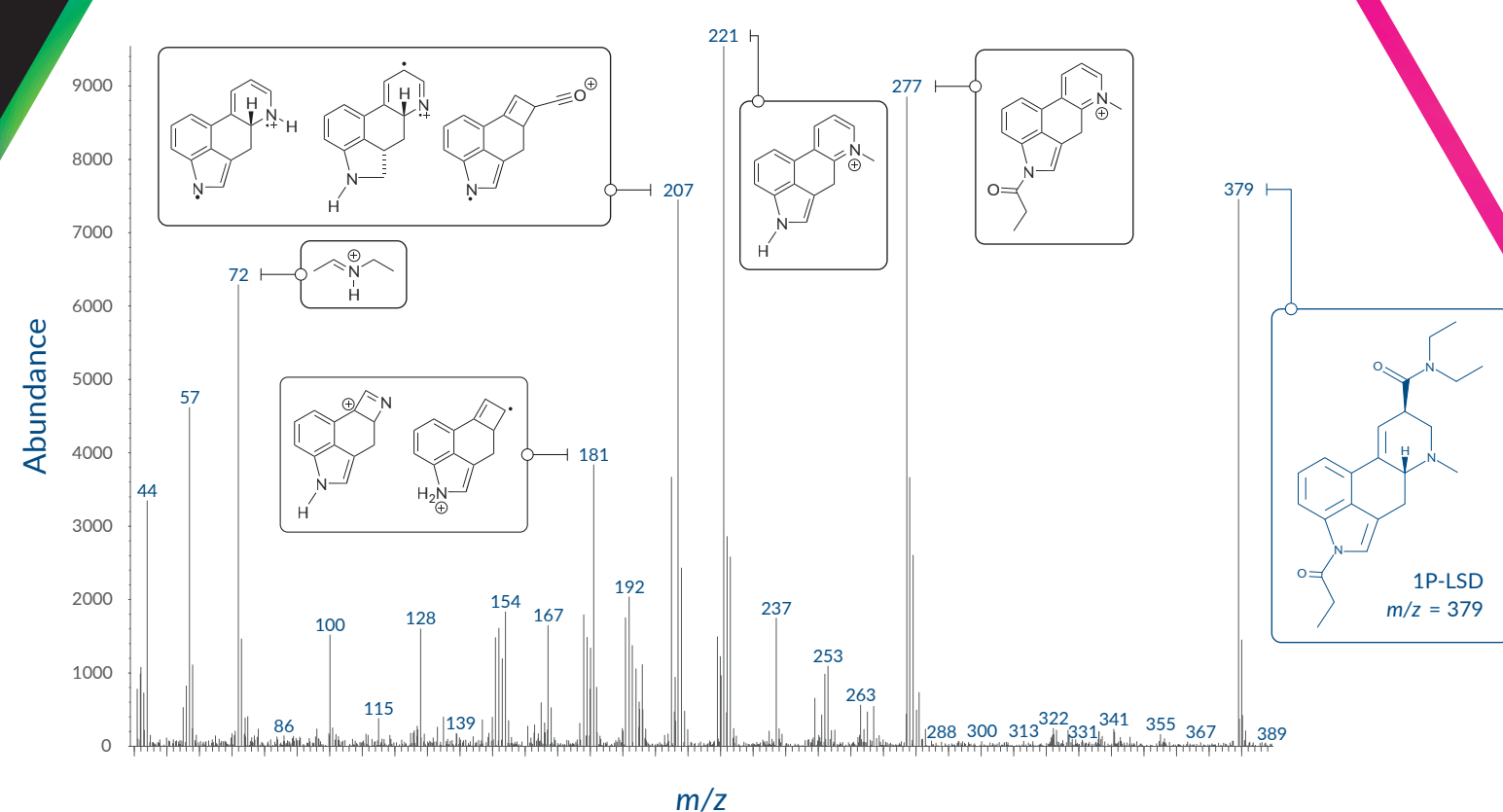
- **AL-LAD** (Allyl Lysergic Acid Diethylamide): R¹ = H₂CCH=CH₂
- **ETH-LAD** (Ethyl-LAD): R¹ = CH₂CH₃
- **PRO-LAD** (Propyl-LAD): R¹ = CH₂CH₂CH₃

3. Ring (B) Substitutions:

- **ALD-52** (Acetyl Lysergic Acid Diethylamide): R = COCH₃
- **1P-LSD** (1-Propionyl Lysergic Acid Diethylamide): R = COCH₂CH₃
- **1B-LSD** (1-Butanoyl LSD): R = CO(CH₂)₂CH₃
- **1V-LSD** (1-Valeroyl LSD): R = CO(CH₂)₃CH₃
- **1cP-LSD** (1-cyclopropanecarbonyl LSD): R = COC₃H₅
- **2-bromo LSD**: R = H, Br is at the C² position

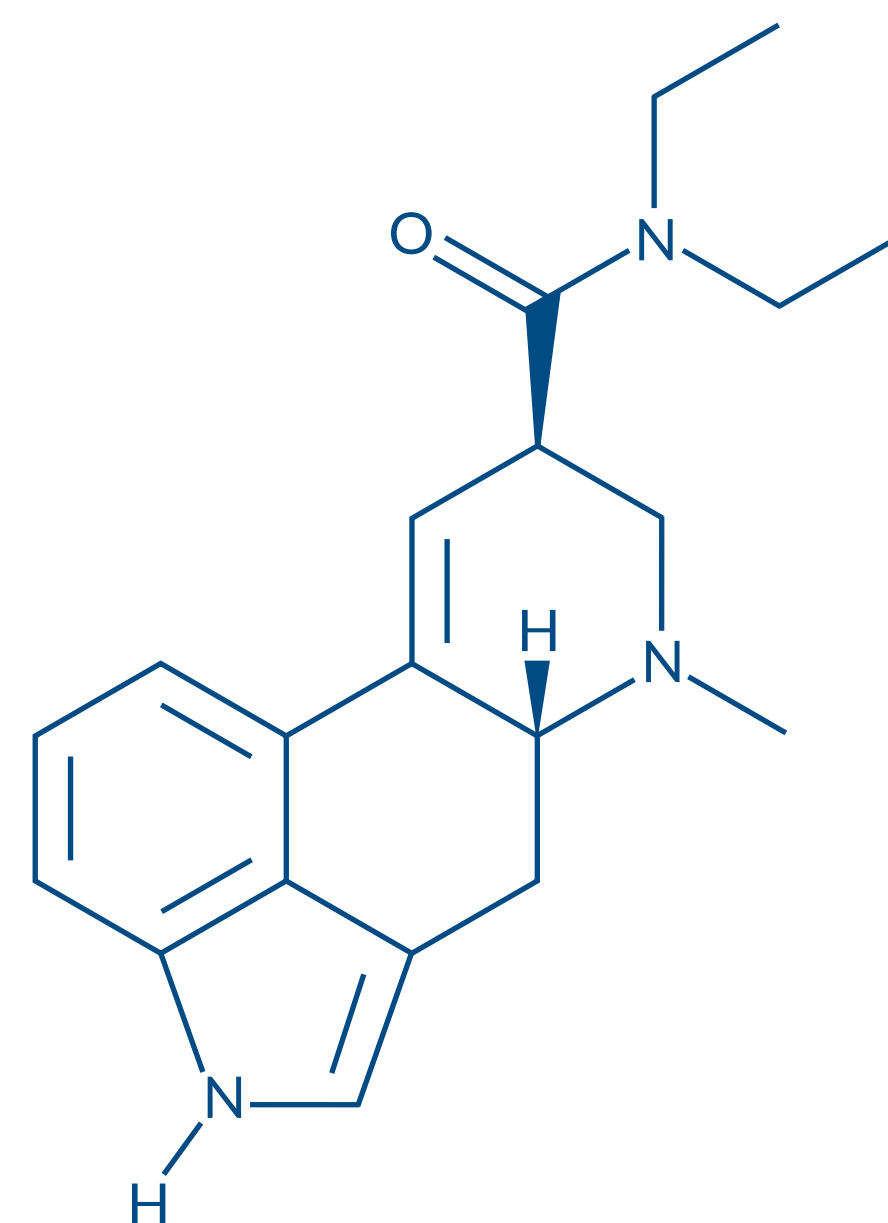
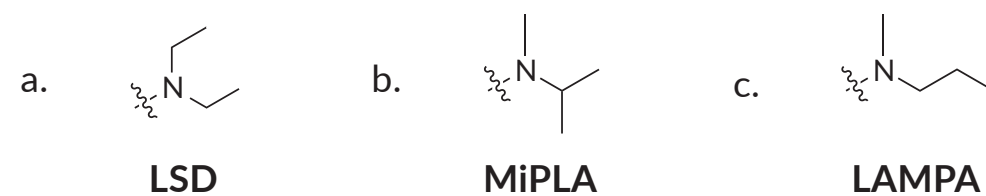


Mass Spectrum of 1P-LSD and Tips for Interpretation



Tips for EI-MS Interpretation:

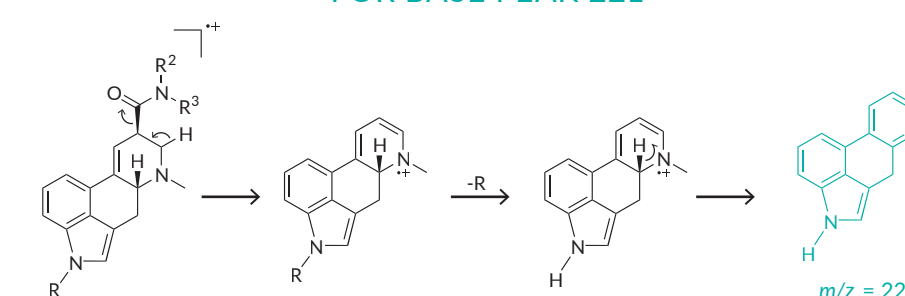
- Lysergamides typically show the MW ion peak.
- A base peak of m/z = 221 correlates to analogues with an N⁶ methyl group.
- Analogues with an acyl group at N¹ often show a second base peak with m/z = [221 + mass of acyl group] - 1. For example: 277 = [221 + 57] - 1.
- Observation of the m/z = 72 peak indicates that N¹⁸ has one of the following as substituents:



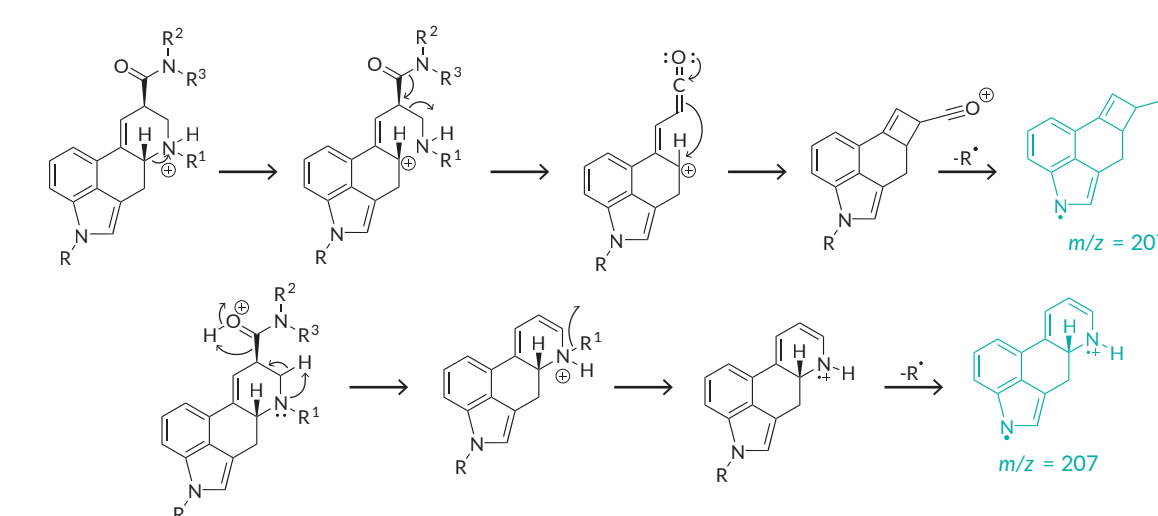
LSD

Systematic Name: Lysergic Acid Diethylamide
Synonyms: LSD-25, LAD, LD, (+)-LSD, D-LSD
DEA Schedule: Schedule I
Handling Notes: Light sensitive

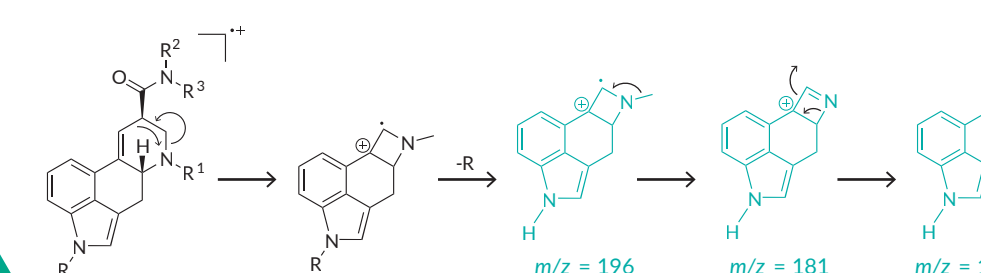
Proposed Mechanism for Some Common Fragments FRAGMENTATION PATHWAY FOR BASE PEAK 221



MULTIPLE FRAGMENTATION PATHWAYS LEADING TO SECONDARY BASE PEAK 207



FRAGMENTATION PATHWAYS LEADING TO OTHER COMMON FRAGMENTS



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· References used to compile poster
· Research tools for LSD & its structural derivatives
· Articles & more

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