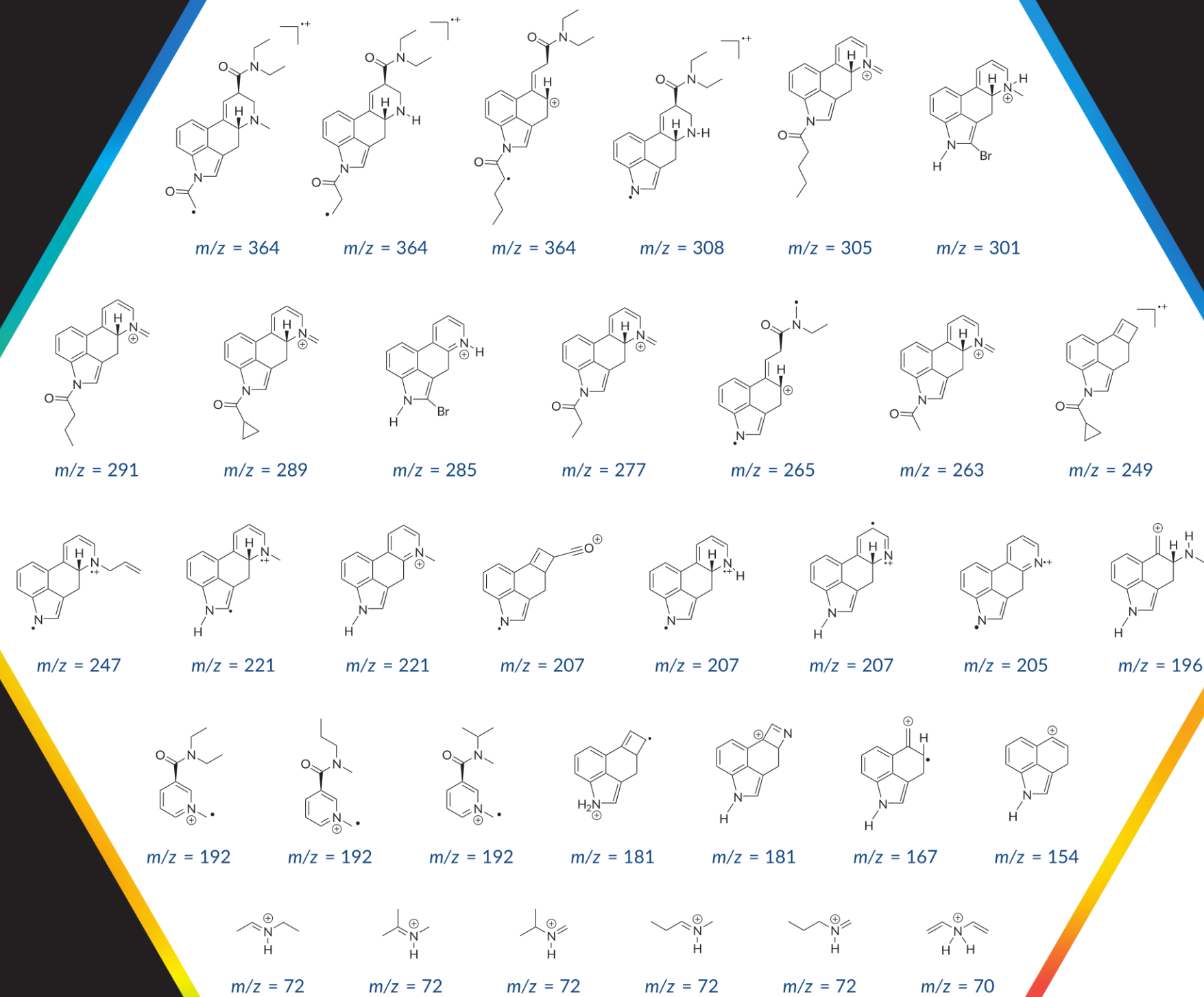
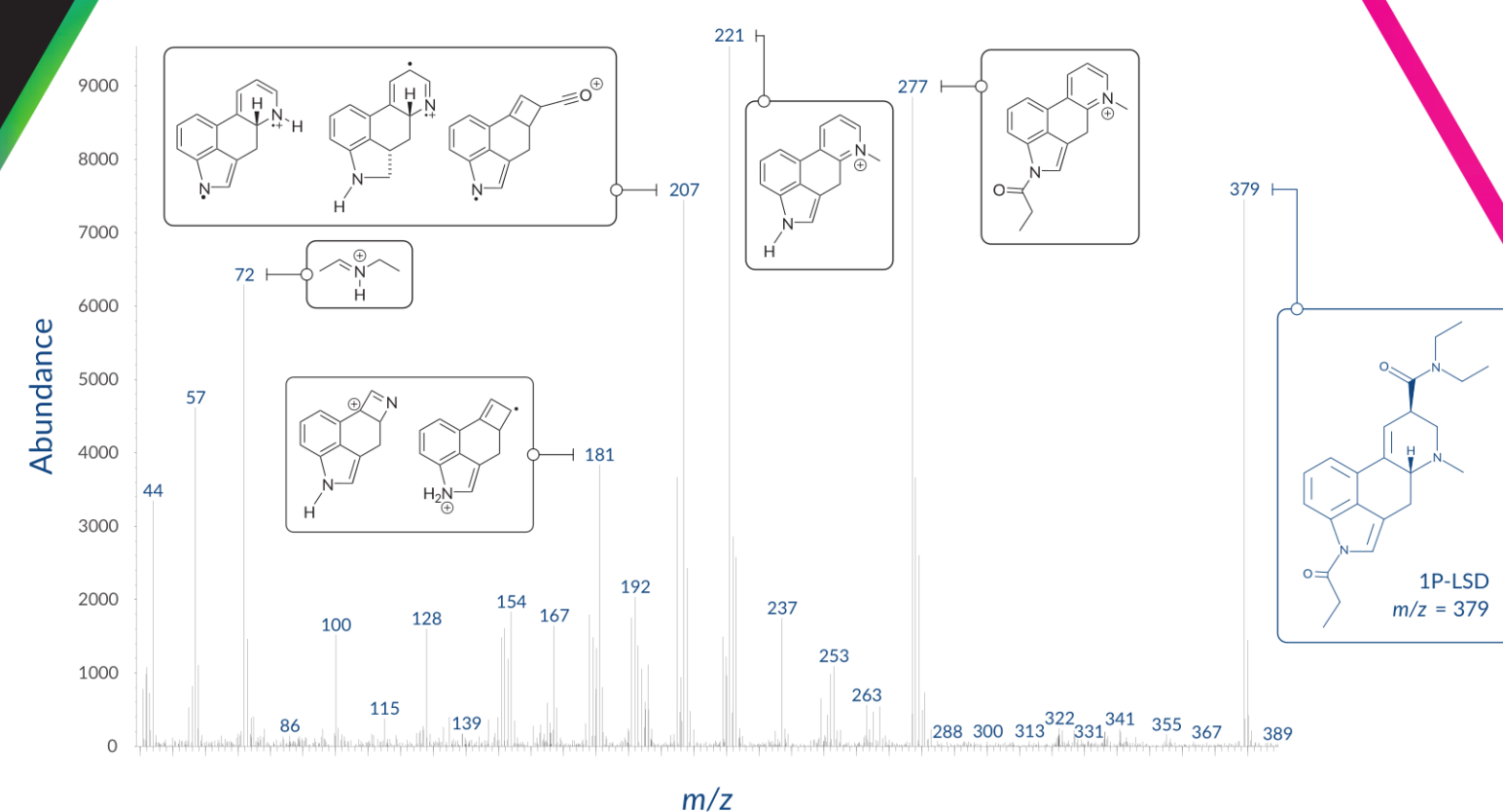


Laboratory Guide for LYSERGAMIDE Identification and Naming

Common Lysergamide MS Fragments

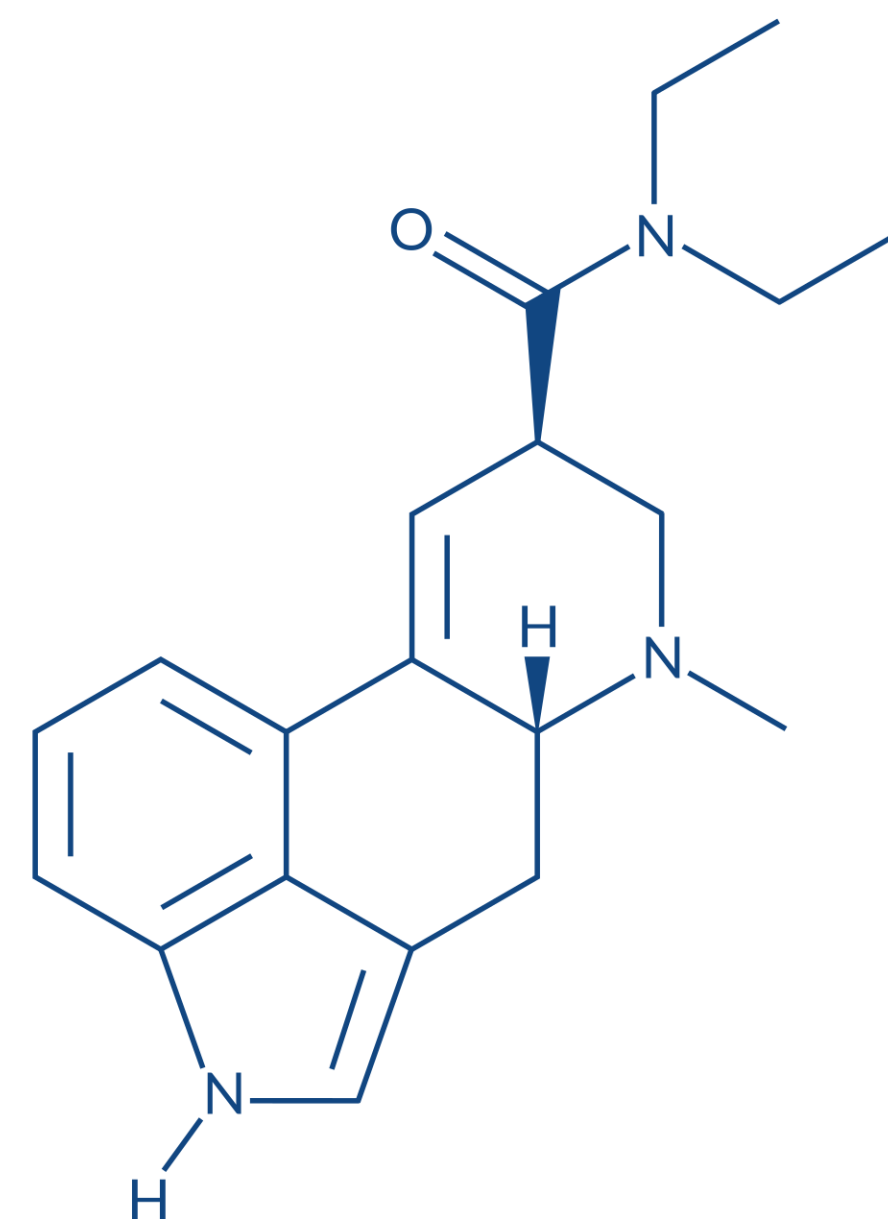
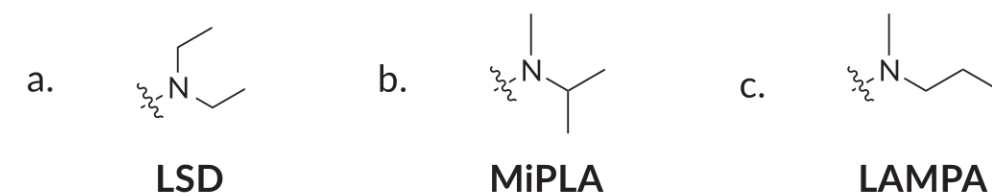


Mass Spectrum of 1P-LSD and Tips for Interpretation



Tips for EI-MS Interpretation:

- Lysergamides typically show the MW ion peak.
- A base peak of $m/z = 221$ correlates to analogues with an N^6 methyl group.
- Analogues with an acyl group at N^1 often show a second base peak with $m/z = [221 + \text{mass of acyl group}] - 1$. For example: $277 = [221 + 57] - 1$.
- Observation of the $m/z = 72$ peak indicates that N^{18} has one of the following as substituents:



LSD

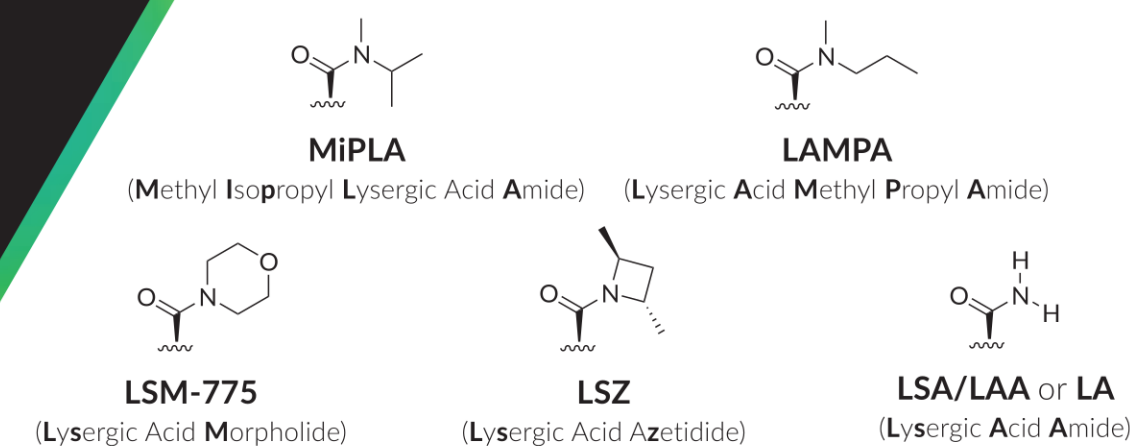
Systematic Name: Lysergic Acid Diethylamide
Synonyms: LSD-25, LAD, LD, (+)-LSD, D-LSD

DEA Schedule: Schedule I
Handling Notes: Light sensitive

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, $R = H$, $R^1 = CH_3$, and R^2 and $R^3 = CH_2CH_3$. LSD analogs have a variety of R , R^1 , R^2 , and R^3 groups. Here are some common lysergamides and how their names are derived.

1. Amide N^{18} Substitutions:

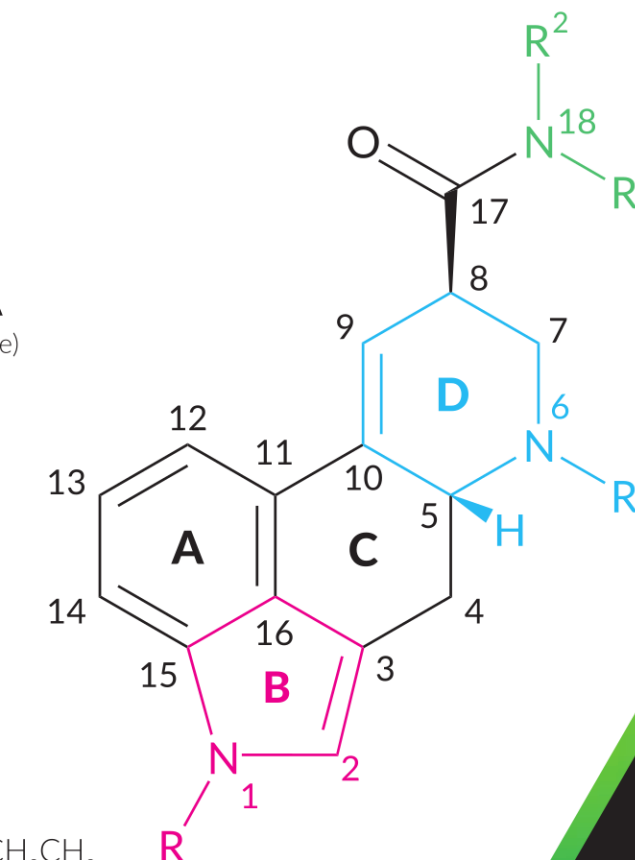


2. Ring (D) Substitutions at N^6 position:

- AL-LAD (Allyl Lysergic Acid Diethylamide): $R^1 = H_2CCH=CH_2$
- ETH-LAD (Ethyl-LAD): $R^1 = CH_2CH_3$
- PRO-LAD (Propyl-LAD): $R^1 = CH_2CH_2CH_3$

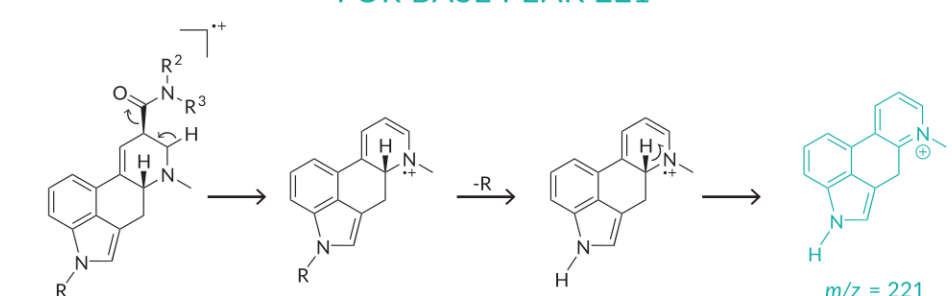
3. Ring (B) Substitutions:

- ALD-52 (Acetyl Lysergic Acid Diethylamide): $R = COCH_3$
- 1P-LSD (1-Propionyl Lysergic Acid Diethylamide): $R = COCH_2CH_3$
- 1B-LSD (1-Butanoyl LSD): $R = CO(CH_2)_2CH_3$
- 1V-LSD (1-Valeroyl LSD): $R = CO(CH_2)_3CH_3$
- 1cP-LSD (1-cyclopropanecarbonyl LSD): $R = COC_3H_5$
- 2-bromo LSD: $R = H$, Br is at the C^2 position

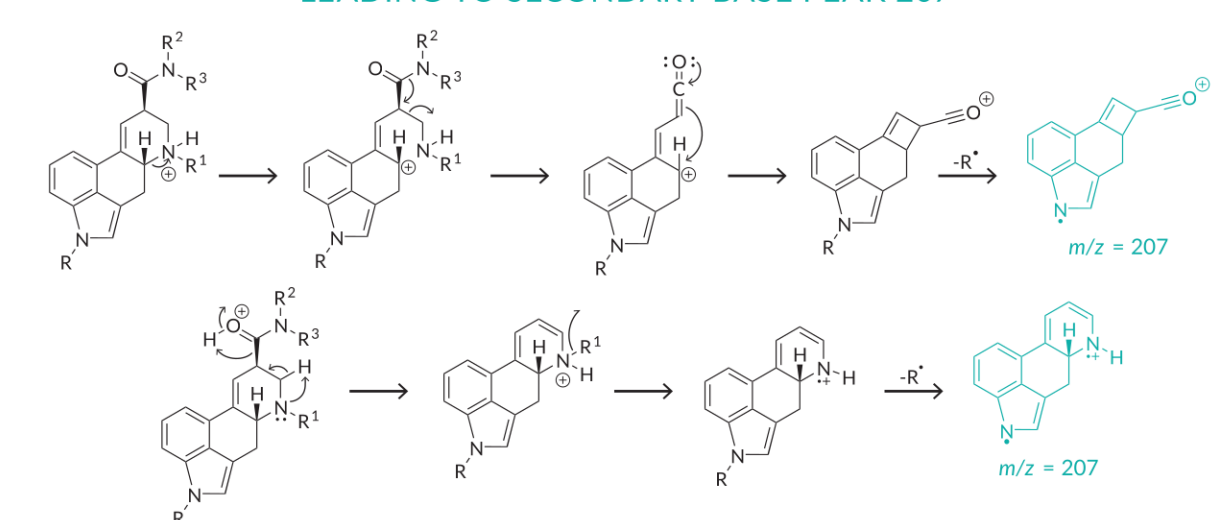


Proposed Mechanism for Some Common Fragments

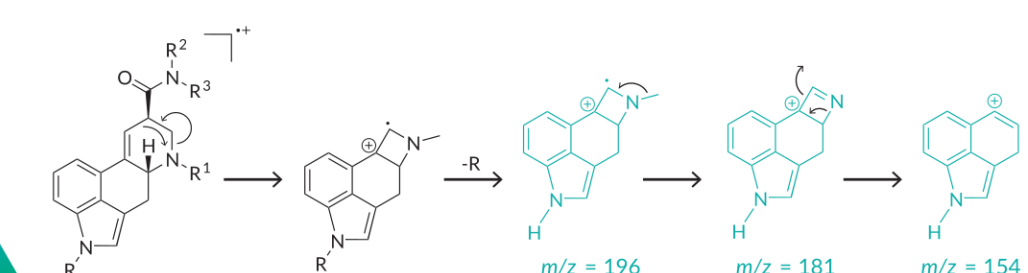
FRAGMENTATION PATHWAY FOR BASE PEAK 221



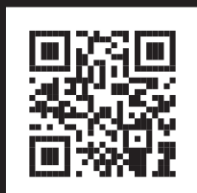
MULTIPLE FRAGMENTATION PATHWAYS LEADING TO SECONDARY BASE PEAK 207



FRAGMENTATION PATHWAYS LEADING TO OTHER COMMON FRAGMENTS



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