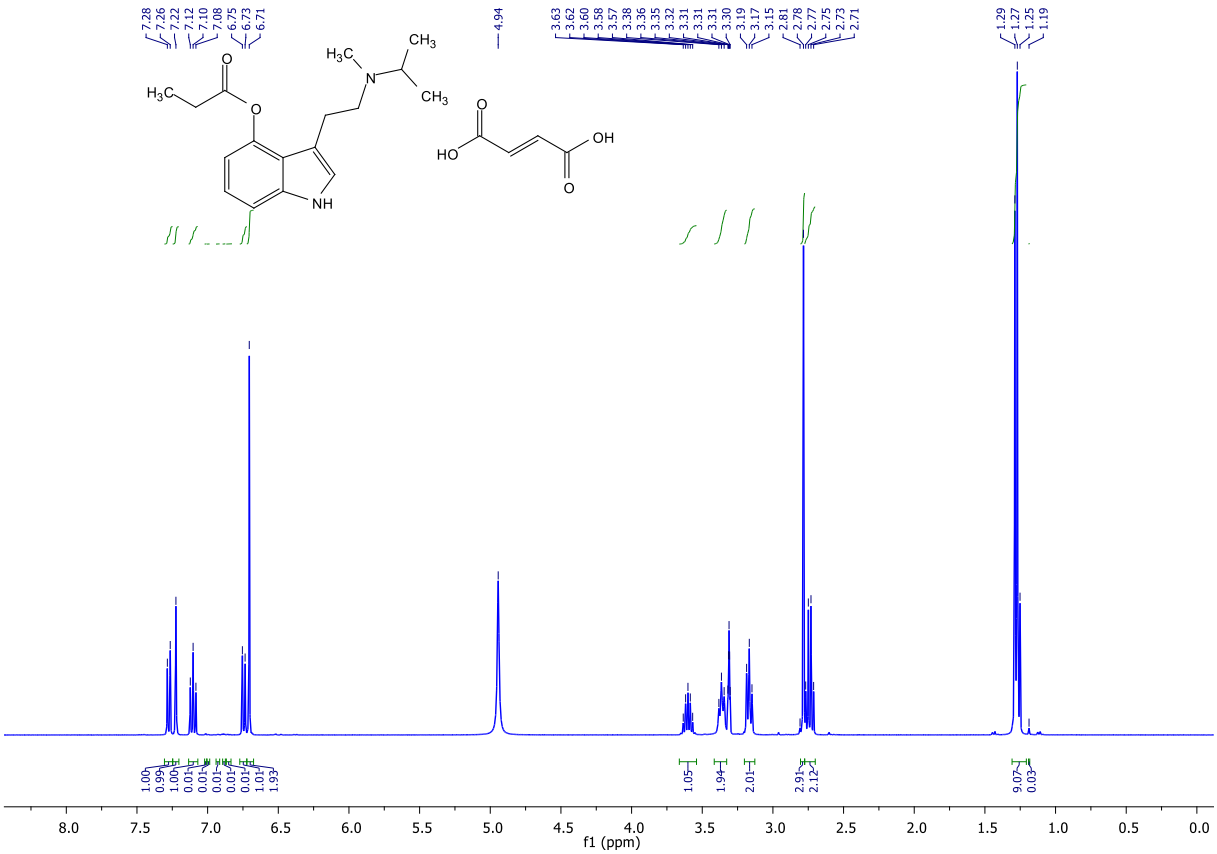
^{1}H NMR analysis report

Batch No.: 4-PROMIF_01 **Date:** 11/11/2026

Instrument: Bruker 400 MHz
Solvent: Methanol-d_4 (CD_3OD); spectra calibrated to residual solvent peak (δ = 3.31 ppm)

Expected structure: 4-Propionyloxy-*N*-*methyl*-*N*-isopropyltryptamine, hydrogenfumarate

Results:
Data consistent with the proposed structure: Yes
Estimated purity: 99%



^{1}H NMR (MeOD), cmpd and imp integrated.

^{1}H NMR (400 MHz, MeOD) δ (ppm): 7.27 (d, *J* = 8.1 Hz, 1H, Ar-H), 7.22 (s, 1H, Ar-H), 7.10 (t, *J* = 7.9 Hz, 1H, Ar-H), 6.74 (t, *J* = 6.7 Hz, 1H, Ar-H), 6.71 (s, 2H, 2 × CH), 3.60 (hept, *J* = 6.6 Hz, 1H, CH), 3.36 (t, *J* = 7.5 Hz, 2H, CH_2), 3.17 (t, *J* = 7.6 Hz, 2H, CH_2), 2.78 (s, 3H, CH_3), 2.74 (q, *J* = 7.5 Hz, 2H, CH_2), 1.32 – 1.23 (m, 9H, 2 × NCH_3 + CH_3).

Notes:

The ^{1}H NMR spectroscopic data confirmed the identity of the analyte as 4-propionyloxy-*N*-*methyl*-*N*-isopropyltryptamine. The compound was identified as a fumaric acid salt - comparison of the integral intensity of the aromatic protons (Ar–H) with that of the olefinic protons of fumaric acid (δ = 6.71 ppm) revealed an integral ratio of 1:2, consistent with a 1:1 molar ratio of the analyte to fumaric acid. These findings establish the compound as the stoichiometric hydrogen fumarate salt.

In addition to the characteristic resonances of the 4-propionyloxy substitued tryptamine scaffold, the spectrum clearly demonstrates the presence of an ***N*-methyl-*N*-isopropyl substitution**. The *N*-methyl group gives rise to a singlet at δ = 2.78 ppm (3H), while the isopropyl moiety is characterized by a heptet at δ = 3.60 ppm (1H) and a doublet at δ = 1.28 ppm (6H).

The analyzed sample contains a minor amount of an unidentified impurity (approximately 1 mol%). In addition, trace levels of residual methyl *tert*-butyl ether (MTBE) were detected, as evidenced by characteristic singlets at δ = 1.19 and 3.22 ppm. The residual MTBE content was estimated to be below 0.1% (w/w).