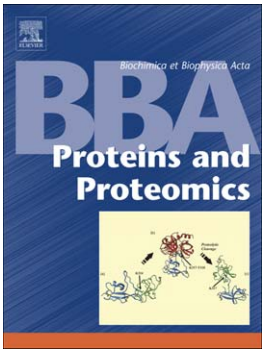

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Inactivation of the particulate methane monooxygenase (pMMO) in *Methylococcus capsulatus* (Bath) by acetylene☆

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***Key words**:* Acetylene, Mechanism-based inactivation, Particulate methane monooxygenase, *Methylococcus capsulatus* (Bath), Mass spectrometry, Computational simulation.

Abbreviations: AMO, ammonia monooxygenase; BN-PAGE, blue native-polyacrylamide gel electrophoresis; DDM, *n*-dodecyl β-D-maltoside 98%; DHB, dihydroxybenzoic acid; EPR, electron paramagnetic resonance; FA, formic acid; GC, gas chromatography; LC, liquid chromatography; LTQFT, linear ion trap Fourier transform ion cyclotron resonance; MeCN, acetonitrile; MMO, methane monooxygenase; NADH, reduced form of nicotinamide adenine dinucleotide; pMMO, particulate MMO; MS, mass spectrometry; MALDI, matrix assisted laser desorption ionization; TOF-MS, time-of-flight mass spectrometry; SDS-PAGE, sodium dodecyl sulfate polyacrylamide gel electrophoresis; LC-MS/MS, liquid chromatography-tandem mass spectrometry; Mascot: the search engine for protein identification using MS data.

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