

## **Chemical analysis of Titan's aerosol analogues (tholins) by high resolution mass spectrometry**

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The soluble part of tholins synthesised in a homogeneous RF discharge are analyzed by high resolution mass spectrometry techniques, including MS/MS (fragmentation of observed ions by collision with a non reactive target gas). Polar solvents (methanol and acetonitrile) are used, as well as non polar solvents (toluene), in order to extract different types of molecules (nitriles, hydrocarbons, ...). Two types of tholins have been analysed, synthesised in a nitrogen/methane mixture containing 2% and 10% methane respectively. First results discussing the chemical structure of the extracted molecules in those different conditions will be presented and discussed.