Formaldehyde (CH₂NH) is a known astrophysical molecule with detections in giant molecular clouds, star-forming regions, hot cores and tentatively an external galaxy. It is also linked to the process of Tholin formation and hence of interest to pre-biotic chemistry schemes. The ground-state rotational spectrum is a simple asymmetric top and has been previously analyzed up to 110 GHz⁹. We present an experiment designed to study the Tholin formation process using the submillimeter wavelengths (up to 900 GHz) and discuss the resulting new spectroscopy for formaldehyde.