

## DEVELOPMENT OF QUANTITATIVE APPLICATIONS FOR MOLECULAR ROTATIONAL RESONANCE SPECTROSCOPY

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The greatest strength of molecular rotational resonance spectroscopy as an analytical technique is its ability to unambiguously resolve the spectral signatures of multiple compounds, including isomers, within a mixture without requiring separation or purification. When a mixture of compounds is present, it is extremely desirable to accurately quantify each of these components. For applications in the chemical and pharmaceutical industry, a majority of the challenges in quantitative analysis are related to how the sample is handled and measured. In this talk, I will discuss our ongoing efforts to address these challenges. Some of these topics include absolute quantitation of analytes within an unknown matrix; relative quantification of a set of compounds with a difference in vapor pressure; and calibration of molecular response factors without pure reference standards.