

Abstract Submitted
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Raman Spectroscopy and Microscopy of Chocolate SIYU HE, Texas AM University, DMITRI VORONINE, ALEX SINYUKOV, ALEXEI SOKOLOV, Texas AM University, Baylor University, HONGYUAN LI, Texas AM University, MARLAN SCULLY, Texas AM University, Baylor University, Princeton University, IQSE TEAM — Raman spectroscopy is an advanced technology for the chemical substance analysis. We assess the application of both Raman microspectroscopy and handheld Raman spectrometry to the analysis of white and dark chocolate. We analyze the ingredients in each type of chocolate, characterize polymorphs and discuss phase transitions of cocoa butter from the constituent vibrational bands. We distinguish different ingredients from the Raman spectra and measure the crystalline states of the cocoa butter in chocolate. Raman spectroscopy and microscopy can reveal the chocolate quality in food science

Siyu He
Texas A
M University

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