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**IR Spectroscopy of Gasses Evolved During Roasting Coffee Beans**

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— We measured the IR spectra of the gasses that evolve during roasting of coffee beans. The spectra recorded at different temperature revealed that the intensity of certain IR bands increase as the temperature increases. For instance, the intensity of the CO<sub>2</sub> band increased by a factor of four and reached a plateau as the roasting temperature approached 200°C. The intensity further increased as the temperature increased above 200°C, however, in two steps. Similarly the intensity of the OH bands monotonically increased until 200°C and then increased further in two rapid steps above 200°C. The temperature ranges where IR intensities change in two steps coincides with the temperature ranges where typically commercial roasting is done and where the first and second “cracks” are heard during roasting.

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