SHIMADZU
Excellence in Science

Solutions for Alcohol-based Hand Sanitizer

Ethanol is widely used in hand sanitizers distributed in the United States. It is commonly blended with water, glycerin, colorants, and fragrances to make the final product.

The United States Centers for Disease Control (CDC) has determined that ethanol concentrations in hand sanitizers must be between 60 and 95% to ensure germicidal and viricidal properties. Ethanol produced to be blended into these products must be ≥94.9% pure and adhere to USP regulatory guidelines.

Shimadzu offers all the tools used for all types of laboratories, from ethanol producers to pharmaceutical manufacturers to ensure compliance with CDC and USP guidelines and regulations.

Shimadzu's IRSpirit Fourier Transform Infrared Spectrophotometer (FT-IR)

Offers a compact footprint and robust, repeatable analysis of ethanol concentrations in liquids. Its attenuated total reflectance (ATR) prism ensures repeatable pathlengths between samples, yielding high-precision results.

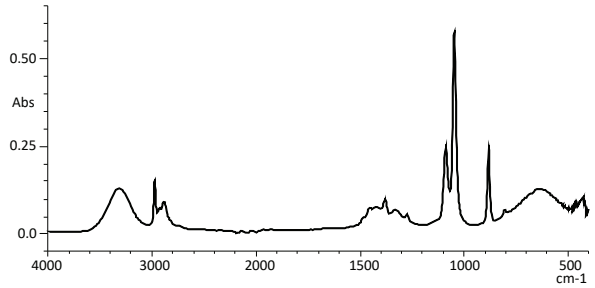
Shimadzu's GC-2030 Gas Chromatograph with Flame Ionization Detector (GC-FID)

Features a user-friendly color touchscreen interface, self-diagnostic functions to maximize uptime, and a high-sensitivity detector for analysis of ethanol and trace-level organic contaminants.

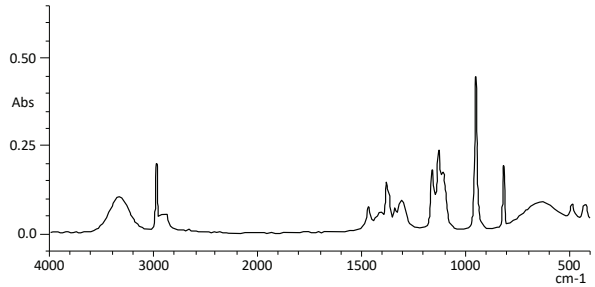
IRSpirit-T FT-IR

- ▶ Easily equipped with Q-ATR prism to ensure fast, repeatable sample placement and results
- ▶ Compact footprint requires minimal bench space
- ▶ Humidity-resistant design – analyze up to 90% relative humidity with KRS-5 Window
- ▶ Minimal sample preparation and less than one-minute analysis time

Absorption Spectra for Ethanol and Isopropyl Alcohol



Absorption spectrum for Ethanol

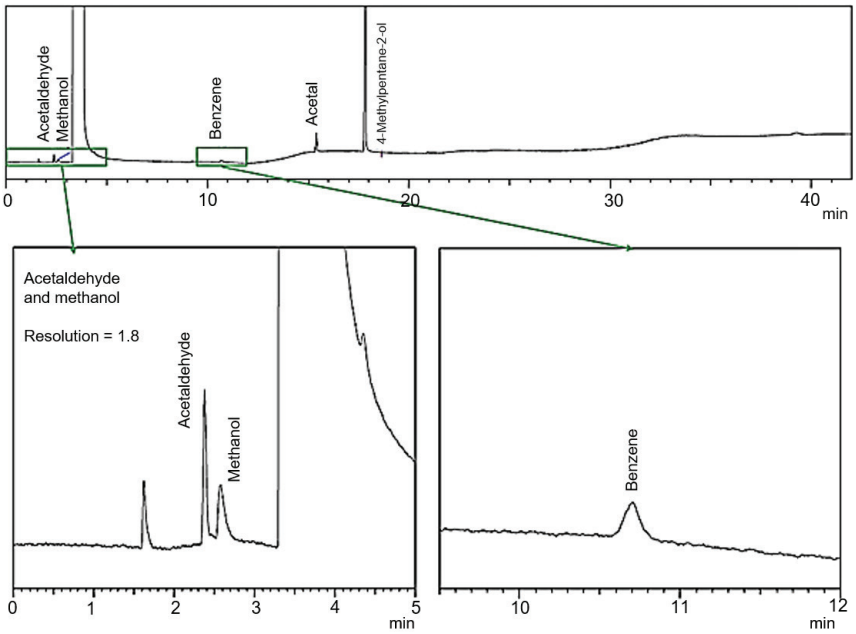


Absorption spectrum for Isopropyl Alcohol

GC-2030

- ▶ Large, color touch-screen creates a simple user interface
- ▶ Proprietary Click-Tek™ column fittings makes maintenance frustration-free
- ▶ Gas-saver technology to minimize consumption of expensive helium
- ▶ Easy conversion between common carrier gases for cost-efficient operation
- ▶ Proudly assembled in the United States

Chromatogram Showing ppm-level Trace Organic Contaminants in an Ethanol Sample



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