

Gas Chromatography (GC)

Quality Testing — Ethanol in Hand Sanitizers



Ethanol

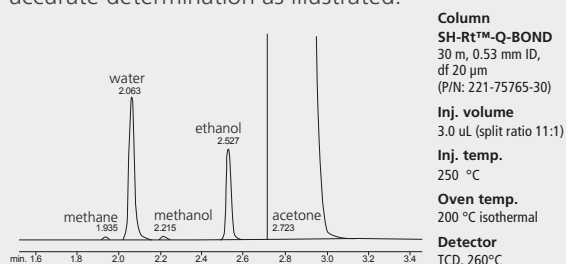
World Health Organization (WHO) recommends the practice of good hand hygiene as one of the basic protective measure against COVID-19. This includes washing hands with soap and water or clean your hands with alcohol-based hand sanitizer.

The U.S. Centers for Disease Control (CDC) recommends to use alcohol-based hand sanitizer that contain at least 60% ethanol or 70% isopropanol. Shimadzu GC is most suited for measurement of alcohol content in alcohol-based hand sanitizer.

Nexis GC-2030

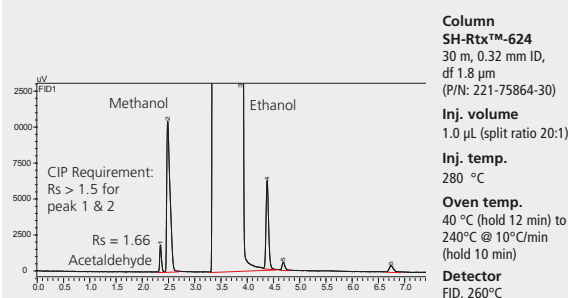
Measurement of Ethanol Content

The National Standard “Hygienic standard for alcohol disinfectants” (GB/T 26373-2010) specifies the amount of ethanol used in hand sanitizer to be 70-80%. GC-FID/TCD can provide a quick, easy, and accurate determination as illustrated.



Maximum Allowable Impurities in Ethanol

European Pharmacopoeia ver. 10.0 specifies the impurities in ethanol as such: methanol $\leq 0.02\%$; (acetaldehyde + acetal) $\leq 0.001\%$; benzene $\leq 0.0002\%$; other impurities $\leq 0.03\%$



Nexis GC-2030

Designed with the Analyst in Mind

An advanced interface enables intuitive operation with clear graphics. Shimadzu's latest tool-free maintenance technology makes daily maintenance easy.

World's Highest Sensitivity and Reproducibility

Achieves the world's highest sensitivity on all of the detectors, such as FID and BID. The advanced flow controller (AFC) enhances reliability with excellent repeatability.

Exceptional Expandability and Productivity

Nexis GC-2030 can be customized to meet a customer's specific requirements and needs. Options and functions to use hydrogen carrier gas safely in high-speed analysis maximize analysis productivity.



Shimadzu GC column (SH-Rt™-Q-BOND)

ID	df	Temp. Range	30 m
0.32 mm	10 µm	to 280/300 °C	221-75764-30
0.53 mm	20 µm	to 280/300 °C	221-75765-30

Shimadzu GC column (SH-Rtx™-624)

ID	df	Temp. Range	20m	30m	60m	75m	30m + 5m Integra Guard
0.18 mm	1.00 µm	-20 to 240 °C	227-36259-01	–	–	–	–
0.25 mm	1.40 µm	-20 to 240 °C	–	221-75863-30	227-36215-01	–	221-76183-30
0.32 mm	1.80 µm	-20 to 240 °C	–	221-75864-30	221-75864-60	–	221-76157-35
0.53 mm	3.00 µm	-20 to 240 °C	–	221-75865-30	221-75865-60	221-75865-75	221-76158-30

* Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.



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