

Septa

Replace after 100 injection*



Septa are used to seal the injection port, allowing syringe to penetrate and introduce sample into the injection port without carrier gas leakage.

Repeated injection will cause wear and tear of septa, resulting in carrier gas leakage. Replace septa after 100 injections or when sign of deterioration is observed, whichever earlier. All septum bleed to some extent. The type of bleeding that occurs varies with the septum, and results in different patterns on chromatograms. For high-sensitivity analysis, select a septum whose bleeding will not interfere with the peak of the target compound.

Select your septa now using Shimadzu Assist.



<https://bit.ly/Assist-Septa>

Glass insert / O-Ring

Replace after 500 injection*



GC inlet functions as the interface between the syringe and the GC capillary column, where the sample is introduced, vaporized, mixed with carrier gas and transferred to the column. Glass insert geometry and packing materials enable the glass insert to achieve greater heated surface area, improving sample vaporization.

Impurities from sample and small pieces of septa can accumulate in the glass insert following repeated injection, affecting your chromatography. Replace glass insert together with O-ring after 500 injections or when dirt is observed in the glass insert, whichever earlier.

Visit ShopShimadzu now to shop for your inlet liner.

Ferrule

2 piece for each GC column



Ferrules are used to ensure leak free connection of GC column to injector and detector. Select suitable ferrule based on type of detector.

Non-MS detectors (FID, TCD, FTD, FPD, ECD, BID):
Graphite ferrule, ClickTek ferrule

MS detector: Graphite Vespel ferrule, SilTite Metal ferrule

Visit ShopShimadzu now to shop for your ferrule.

GC Consumables When to Replace?



Syringe

Replace after 500 injection*



Syringe are used to introduce sample into injection port. Shimadzu Diamond syringes are the result of technological advancements in materials, design, and engineering. Designed to meet the ever increasing levels of sensitivity required by today's analyses, Shimadzu Diamond syringes give you a new level of accuracy and precision. Sample matrix can cause deterioration of syringe, resulting in tight plunger movement or clogging of syringe. Replace syringe after 500 injections or when cleaning of syringe does not recover smoothness in sliding of plunger, whichever earlier.

Select your syringe now using Shimadzu Assist.



<https://bit.ly/Assist-Syringe>

Column

Replace when experiencing chromatographic issues



Column lifetime can vary depending on the type of column, usage condition and sample quality. Chromatographic issues (e.g. change in retention time, decrease resolution, decreased sensitivity etc.) are indication for replacing of column.

Perform troubleshooting to ensure problem is caused by column (refer to our troubleshooting guide for details). Trim the front end (0.5 to 1m) and condition your column, observe if issue is resolved. Replace column if chromatographic performance cannot be recovered.

Select your GC column now using Shimadzu Assist.



<https://bit.ly/Assist-GC-Column>

Gas Filter

Replace yearly



Impurities in gases, such as hydrocarbons, moisture and oxygen, can contaminate the gas line and instrument, cause column degradation and affect the accuracy of your analysis results, which may lead to instrument downtime. Even with high-purity gases, contaminants may come from pressure regulators or other parts of the gas line. Therefore, gas filter is essential to ensure high quality gas is used for GC analysis.

Inspect your gas filters regularly and replace them yearly or when indicator colour changes, whichever earlier.

Visit ShopShimadzu now to shop for your gas filter.

*Lifetime based on estimation. Actual lifetime may vary depending on sample and usage condition.

