

Technical Justification

1. CPDC uses Acrylonitrile detection method for the US SOHIO process technology.
2. Monoethyl ether of hydroquinone (MEHQ) detection method: IS:12540 A-13 is no MEHQ calibration curve method in the file, and MEHQ content cannot be verified. How to identify this method? It is recommended to use UV Spectrophotometer to calibrate the calibration curve.
3. Hydrocyanic acid content detection method: IS:12540 A-7, Acrylonitrile-free from hydrocyanic acid, and how to get it?
4. Acetaldehyde content detection method: IS:12540 A-11 Acrylonitrile-free from acetaldehyde, and how to get it?
5. Methyl Vinyl Ketone content (MVK) detection method: IS:12540 A-9 Acrylonitrile-free from methyl vinyl ketone, and how to get it? IS:12540 A-9 detection method is Infrared spectrophotometer, CPDC detection method is Gas chromatograph method. (see figure1)
6. IS:12540 A-10: A typical section of a chromatogram for acetonitrile and acrylonitrile is shown in Figure2. The GC column uses the packing column. The separation of acrylonitrile and acetonitrile peaks is not good. Shown in Figure1, the GC column uses the capillary column. The separation of acrylonitrile and acetonitrile peaks is good. (see figure1& figure2)

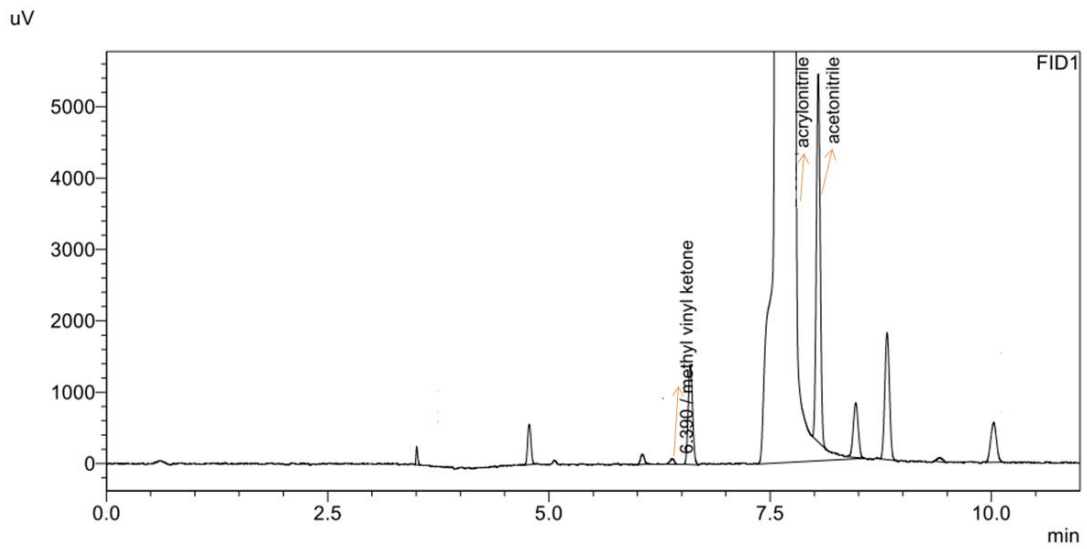


Figure 1. CPDC Gas chromatograph (Capillary column)

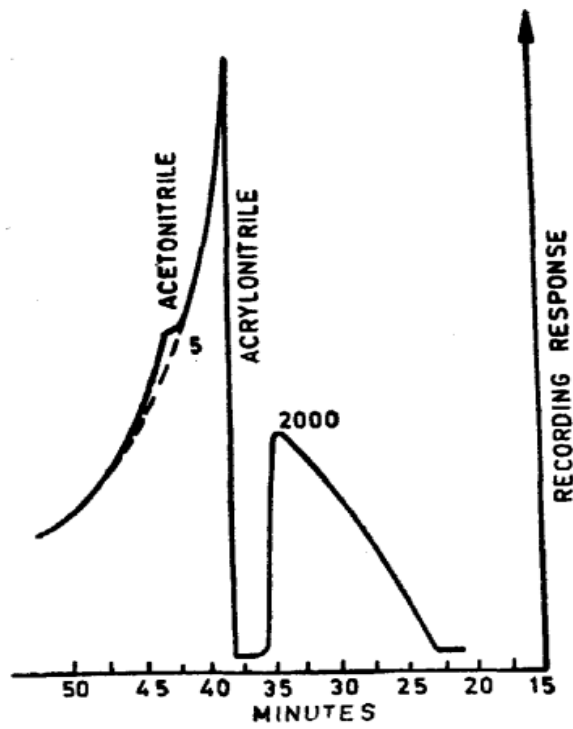


FIG. 2 CHROMATOGRAM FOR ACETONITRILE AND ACRYLONITRILE

Figure 2. IS:12540