



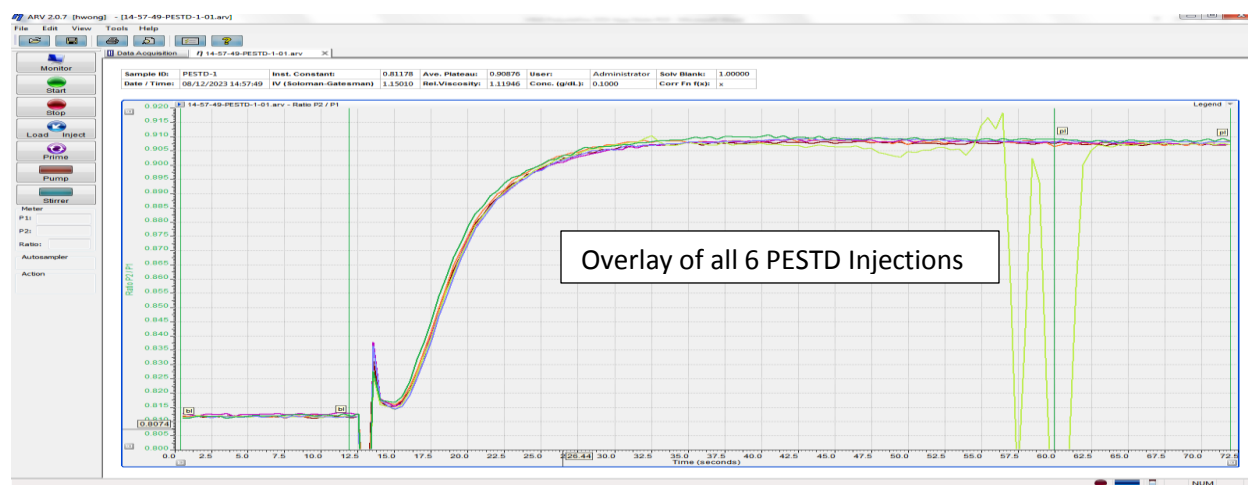
HT-DSV Application Note #19

Polyethylene QA/QC IV Standard for HT-DSV

The purpose of this App Note is to present comparison IV (intrinsic Viscosity) data of an in-house Polyethylene standard vs historical NIST SRM's. This HMJ-PESTD is important because NIST-1475/6 are no longer commercially available. Therefore, an NIST traceable reference is highly desirable. Also, this HMJ-PESTD was selected to closely match the NIST-1475/6 pair.

| | |
|----------------------|-----------------------|
| Solvent | Decalin + 250 ppm BHT |
| Sample Concentration | 0.1 g/dL |
| Prep Temperature | 135C |
| Dissolution Time | 2 Hours |
| Analysis Temperature | 135C |

The following is an overlay of a group of 6 PESTD ViscoGrams. IV data is presented in the Table..



| Sample ID | IV (dL/g) | NIST-1475 | NIST-1476 |
|-----------|-----------|------------------------|------------------------|
| PESTD-1A | 1.1384 | | |
| PESTD-1B | 1.1362 | | |
| PESTD-2A | 1.1290 | | |
| PESTD-2B | 1.1488 | | |
| PESTD-3A | 1.1265 | | |
| PESTD-3B | 1.1403 | | |
| Average | 1.1365 | 1.0659 dL/g (by HTDSV) | 1.2053 dL/g (by HTDSV) |
| SD | 0.0081 | 1.042 dL/g (NIST COA) | 1.180 dL/g (NIST COA)_ |
| RSD | 0.71% | | |

