

Study of development on new residue test method for LPG

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Automobile LPG is spotlighting as a clean fuel, however in spite of meeting in all of the LPG standards, the vehicle troubles by the residues which are not identified have been reported frequently. Therefore, in this study we improved the current LPG residue method(ASTM D2158) in accuracy by increasing the sample amount to 500mL instead of 100mL and introducing weight unit(mg/kg) instead of volume unit(mL/100mL), and considering safety and test time as increasing in the sample amount, also recommended proper the test equipments (test cell, distillation flask, upper distillation tube. etc.) and the test temperature(ambient temp. or after 20°C distillation, distillate 37.8°C). And for tracing a residue origin we developed the test method of a calibration of major residues(plasticizer(DOP, DOA), amine(MDEA)) using GC-MS.