

ABSTRACT:

AASHTO has a standard test method for determining the specific gravity of aggregates. The people in the Aggregate Section of the Central Materials Laboratory perform the AASHTO T-85 test for AMRL inspections and reference samples. Iowa's test method 201B, for specific gravity determinations, requires more time and more care to perform than the AASHTO procedure. The major difference between the two procedures is that T-85 requires the sample to be weighed in water and 201B requires the 2 quart pycnometer jar.

Efficiency in the Central Laboratory would be increased if the AASHTO procedure for coarse aggregate specific gravity determinations was adopted.

The questions to be answered were:

1. Do the two procedures yield the same test results?
2. Do the two procedures yield the same precision?

An experiment was conducted to study the different test methods. From the experimental results, specific gravity determinations by AASHTO T-85 method were found to correlate to those obtained by the Iowa 201B method with an  $R^2$  value of 0.99. The absorption values correlated with an  $R^2$  value of 0.98. The single operator precision was equivalent for the two methods. Hence, this procedure was recommended to be adopted in the Central Laboratory.