

## Colorado Procedure 50-14

*Standard Method of*

### Calculation of Dust to Asphalt Ratio of Bituminous Mixes

#### 1. SCOPE

1.1 This method covers the calculation used to determine the dust to asphalt (D/A) ratio of bituminous mixes.

#### 2. CALCULATIONS

2.1 
$$DA = (P_{200} - 1) / P_{be}$$

Where:

DA = Dust to Asphalt Ratio,

P<sub>200</sub> = Aggregate content passing the 0.075-mm sieve, the percent by mass of aggregate,

P<sub>be</sub> = Effective asphalt content, percent by total mass of mixture.

2.2

$$P_{be} = - (P_s \times G_b) \times \left( \frac{G_{se} - G_{sb}}{G_{se} \times G_{sb}} \right) + P_b$$

Where:

P<sub>be</sub> = Effective asphalt content, percent by total mass of mixture,

P<sub>s</sub> = Aggregate content, percent by total mass of mixture,

G<sub>b</sub> = Specific gravity of asphalt,

G<sub>se</sub> = Effective specific gravity of aggregate,

G<sub>sb</sub> = Bulk specific gravity of aggregate,

P<sub>b</sub> = Asphalt Content, percent by total mass of mixture.

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