Calculations from the group data:

1) Group mean for mg ASA/tablet
   Tablet 1 (Cell B18): AVERAGE (B6:B14)
   Tablet 2 (Cell C18): AVERAGE (C6:C14)
   Tablet 3 (Cell D18): AVERAGE (D6:D14)
   Mean for all accepted tablets (Cell F5): AVERAGE (B6:D14)

2) Group mean for %wt ASA/tablet
   Tablet 1 (Cell B35): AVERAGE (B23:B31)
   Tablet 2 (Cell C35): AVERAGE (C23:C31)
   Tablet 3 (Cell D35): AVERAGE (D23:D31)
   Mean for all accepted tablets (Cell F22): AVERAGE (B23:D31)

3) Group mean for %wt ASA in powder (Cell C52): AVERAGE (B40:B51)

4)
   Standard deviation for mg ASA/tablet (Cell G5): STDEV(B6:D14)
   Standard deviation for %wt ASA/tablet (Cell G22): STDEV(B23:D31)
   Standard deviation for %wt ASA in powder (Cell C53): STDEV(B23:D31)

Calculations 5-7 were done by hand with the preceding formulas.

5) T-test between individual mean mg/tablet and manufacturer's mg/tablet

$$t = \frac{x - x_t}{\frac{s}{\sqrt{N}}} \qquad \frac{335.12 - 325}{5.88/\sqrt{3}} = \frac{10.12}{3.39} = 2.97$$

$x = experimental\ mean$
$x_t = true\ value$
$s = standard\ deviation\ of\ experiment$
$N = \#data\ points$

6) T-test between group mean mg/tablet and manufacturer's mg/tablet

$$t = \frac{x - x_t}{\frac{s}{\sqrt{N}}} \qquad \frac{3325.018 - 325}{19.3957/\sqrt{27}} = \frac{0.018}{3.73} = 0.0496$$

$x = experimental\ mean$
$x_t = true\ value$
$s = standard\ deviation\ of\ experiment$
$N = \#data\ points$

7) T-test for group mean %wt/powder and group mean %wt/tablet

$$t = \frac{x_1 - x_2}{s}\sqrt{\frac{N_1 N_2}{N_1 + N_2}} \qquad s = \sqrt{\frac{2.5860^2(12-1) + 5.0509^2(27-1)}{12+27-2}} = \sqrt{\frac{73.561 + 663.30}{37}} = \sqrt{19.915} = 4.46$$