One can estimate a reasonable plate number for any column as:

$$N \approx 300\ L/d_p$$

L is the column length *(in millimeters)* and d_p is the particle diameter *(in micrometers)*.

For example for 250 mm x 4.6 mm column packed with 5 micron particles, the predicted value is

$$N \approx 15,000$$

If the measured value of N is about 20% of this predicted value, the column is in good conditions.

COGENT
HPLC Columns™