# Definition and Calculation of RI

The RI of a given component is found by using the time the component elutes (e.g. 9.3550 min) and a look-up table of the RI standards. The component elution time is located between two standards - 6.5071 (RI = 1000 before) and 9.7234 (RI=1200 after ).
The RI of the component is found by interpolation (here between 1000 and 1200)

$$RI_{Target} = RI_{EarlyRef} + \left(\frac{RT_{Target} - RT_{EarlyRef}}{RT_{LateRef} - RT_{EarlyRef}}\right) * \left(RI_{LateRef} - RI_{EarlyRef}\right)$$

$$RI_{Target} = 1000 + \left(\frac{9.3550 - 6.5071}{9.7324 - 6.5071}\right) * (1200 - 1000)$$

$$RI_{Target} = 1000 + \left(\frac{2.8479}{3.2253}\right) * (200) = 1176$$

AMDIS automatically creates the look-up table when the calibration run is analyzed. All RI calculations are done from the look-up table.