

Simulated Nd-fractionation correction
is shown together with measured data of Table S1:
Nd(142/144)(Col (a)) vs. Nd(150/144)(Col(a))

$$\beta_1 := \sqrt{\frac{144}{142}}$$

$$\beta_3 := \sqrt{\frac{150}{144}}$$

$$\beta_N := \sqrt{\frac{146}{144}}$$

$$R1 := 1.141805$$

$$R3 := 4.22942$$

$$q := 1, 0.95.. 0.1$$

$$q_0 := 0.2, 0.25.. 1$$

$$q_s := 0.99, 0.89.. 0.19$$

$$p1 := \frac{\beta_1 - 1}{\beta_1}$$

$$pN := \frac{\beta_N - 1}{\beta_1 \cdot \beta_N}$$

$$p3 := \frac{\beta_3 - 1}{\beta_1 \cdot \beta_3}$$

$$E1 := \frac{\ln(\beta_1)}{\ln(\beta_N)}$$

$$E3 := \frac{\ln(\beta_3)}{\ln(\beta_N)}$$

$$Q := \frac{p1 - E1 \cdot pN}{p3 - E3 \cdot pN}$$

$$S1(q) := R1 \cdot q^{(p1 - E1 \cdot pN)}$$

$$S3(q) := R3 \cdot q^{(p3 - E3 \cdot pN)}$$

$$SR3(q) := \frac{1}{S3(q)}$$

$$SM1(q_0) := \frac{1}{1 - q_0} \cdot \int_{q_0}^1 S1(q) dq$$

$$SM3(q_0) := \frac{1}{1 - q_0} \cdot \int_{q_0}^1 S3(q) dq$$

Y :=

1.141786
1.141792
1.141792
1.141790
1.141789
1.141789
1.141794
1.141784
1.141790
1.141787
1.141780
1.141789
1.141800
1.141796
1.141800
1.141787
1.141788
1.141780
1.141783
1.141789
1.141796
1.141783
1.141803
1.141792
1.141795
1.141796
1.141784
1.141789
1.141796
1.141793
1.141794
1.141788
1.141790

X :=

0.236427
0.236433
0.236434
0.236432
0.236429
0.236429
0.236434
0.236427
0.236431
0.236427
0.236422
0.236431
0.236433
0.236433
0.236436
0.236428
0.236429
0.236428
0.236427
0.236428
0.236431
0.236425
0.236438
0.236432
0.236433
0.236436
0.236429
0.236428
0.236436
0.236432
0.236428
0.236431

$$pp1(q_0) := \frac{SM1(q_0) - R1}{R1} \cdot 10^6$$

$$pp3(q_0) := \frac{SM3(q_0) - R3}{R3} \cdot 10^6$$

$$q1a := SM1(0.999999)$$

$$q1e := SM1(0.2)$$

$$q3a := \frac{1}{SM3(0.999999)}$$

$$q3e := \frac{1}{SM3(0.2)}$$

$$\frac{1}{R3} = 0.23644$$

$$R3 = 4.22942$$

$$SL1_3 := \frac{q1a - q1e}{q3a - q3e}$$

$$SL1_3 = 1.71611$$

$$MX := 0.236431$$

$$MY := 1.141791$$

