

7 Referências Bibliográficas

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Apêndice A

A.1. Cálculo de C_R

A dedução do valor de C_R da eq. (5.1) é mostrada a seguir:

$$C_R = \left(\frac{gC}{100 \text{ gTTNTs}} \cdot \frac{1 \text{ mol N}}{14 \text{ g N}} \cdot \frac{6,022^{23} \text{ átomos N}}{1 \text{ mol N}} \cdot \frac{1 \text{ molécula APTES enxerta}}{1 \text{ átomos N}} \right) \cdot \left(\frac{1 \text{ mol APTES enxerta}}{6,022^{23} \text{ moléculas APTES enxerta}} \cdot \frac{1000 \text{ mmol APTES enxerta}}{1 \text{ mol APTES enxerta}} \right)$$

$$C_R = \frac{10N}{14n}$$

A.2. Cálculo de C_T

O valor de C_T para TTNTs/L foi calculado com a seguinte expressão:

$$C_T = \left(\frac{5,8 \text{ grupos - OH}}{\text{nm}^2} \cdot \frac{1 \text{ nm}^2}{(10^{-9})^2 \text{ m}^2} \cdot \frac{283,1027 \text{ m}^2}{1 \text{ gTTNT}} \right) \cdot \left(\frac{1 \text{ molécula APTES}}{1 \text{ grupo - OH}} \cdot \frac{1 \text{ mol APTES}}{6,022 \cdot 10^{23} \text{ moléculas APTES}} \cdot \frac{1000 \text{ mmol APTES}}{1 \text{ mol APTES}} \right)$$

$$C_T = 2,73 \frac{\text{mmol APTES}}{\text{gTTNTs}}$$

O mesmo cálculo foi realizado para obter o valor de C_T dos TTNTs/H, modificando unicamente o valor da área específica para 283.1027 m²/g.