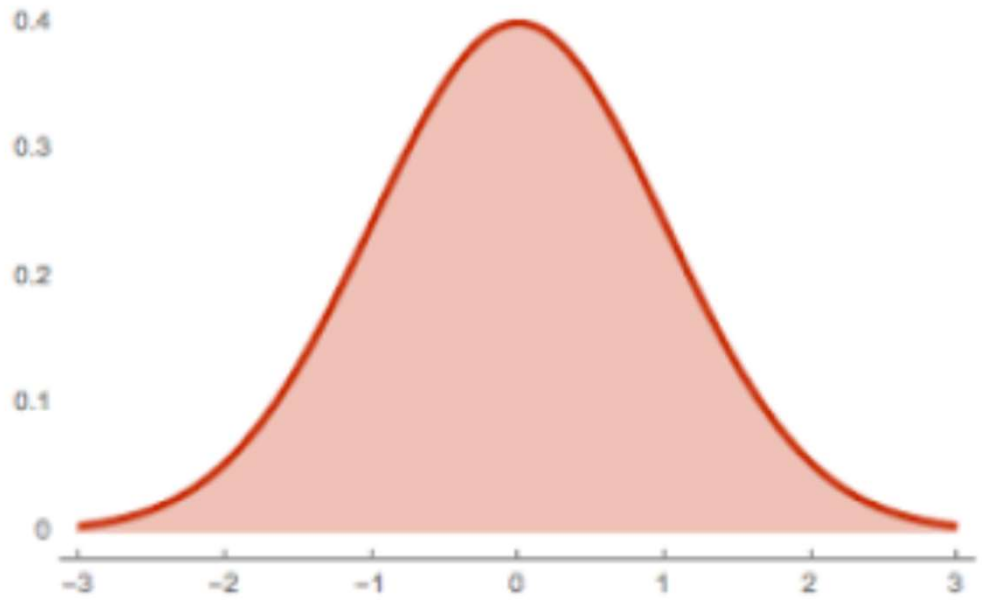
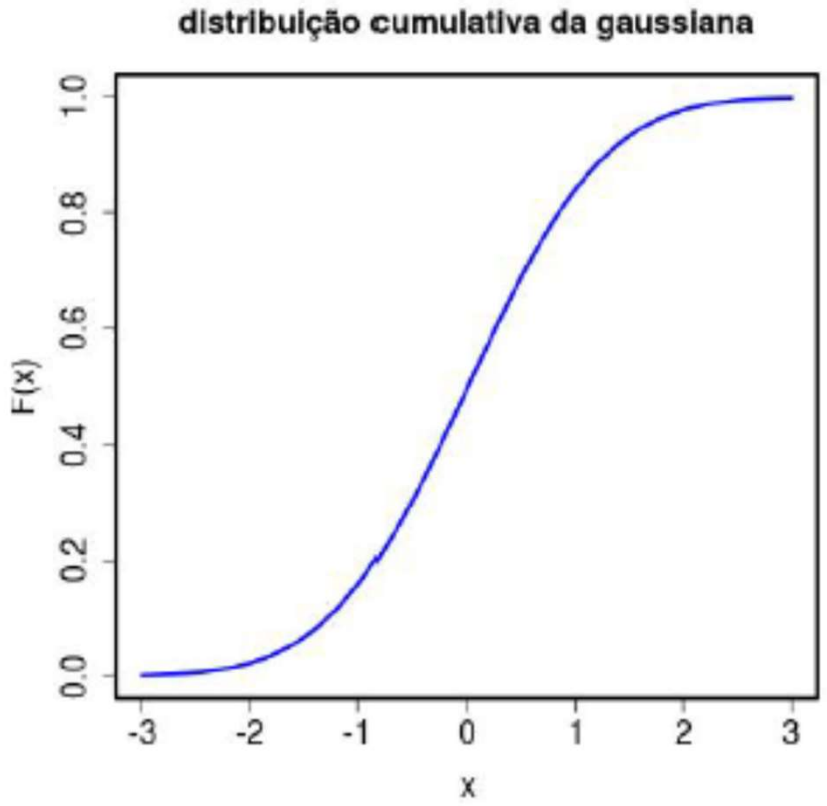
Distribuição gaussiana de probabilidade



distribuição gaussiana:

$$P(x|\mu,\sigma) = \frac{1}{\sqrt{2\pi}\sigma} \exp\left[-\frac{(x-\mu)^2}{2\sigma^2}\right]$$

média μ
desvio padrão σ (ou variância σ^2)



distribuição cumulativa:

$$F(x) = \int_{-\infty}^{x} P(x'|\mu,\sigma)dx' =$$

$$= \frac{1}{2}\left[1 + \mathrm{erf}\left(\frac{\mathrm{x}-\mu}{\sqrt{2}\sigma}\right)\right],$$

onde

$$\mathrm{erf(x)} = \frac{2}{\sqrt{\pi}}\int_{0}^{\mathrm{x}} \mathrm{e}^{-\mathrm{u}^2/2}\mathrm{du}$$

é chamada de *função erro*

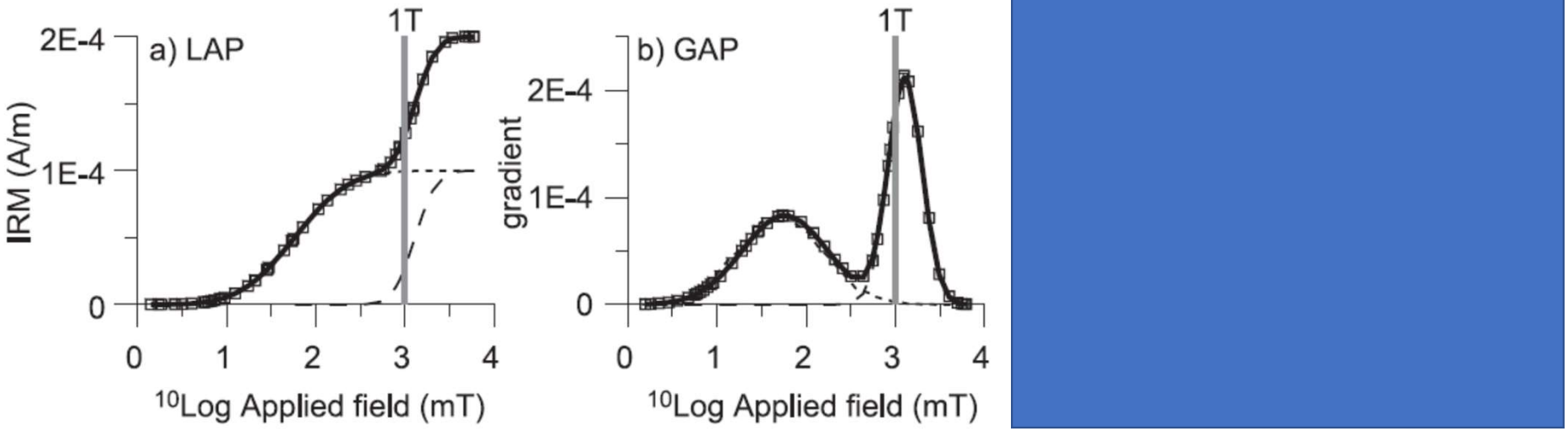
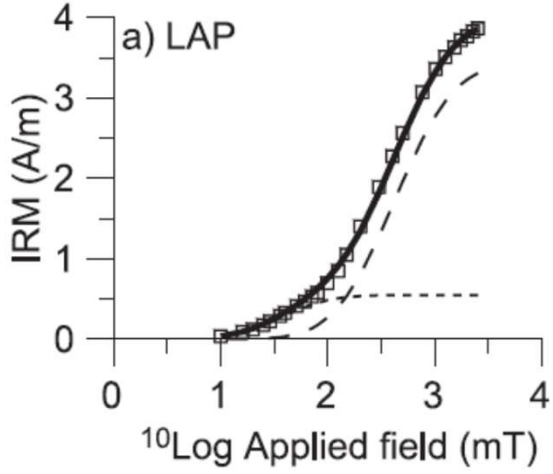


Fig. 2. (a) LAP for a modelled mixture of magnetite (SIRM = 0.1 mA/m, $\log(B_{1/2}) = 1.76$, DP = 0.48) and goethite (SIRM = 0.1 mA/m, $\log(B_{1/2}) = 3.11$, DP = 0.19). Squares represent synthetic data. Short-dashed line represents component 1; long-dashed line component 2. Solid line represents the sum of the components. 1 T cut-off point is indicated for the study of the effect of non-saturation. (b) GAP analysis for the modelled mixture. Lines and symbols as in panel a. (c) SAP analysis for the modelled mixture. Lines and symbols as in panel a.



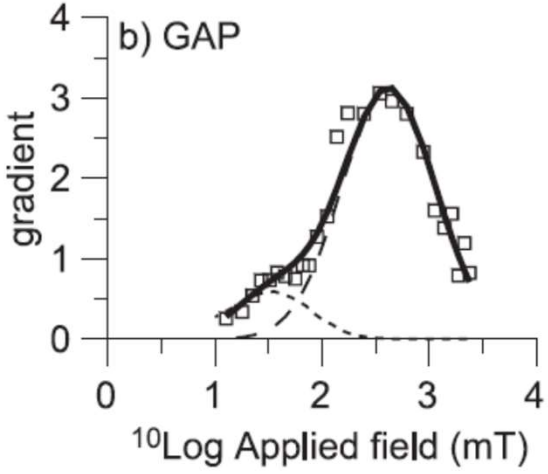


Fig. 6. (a) LAP, (b) GAP and (c) SAP for a real data example of a caliche red bed sample (GLO100, Table 2). Lines and symbols as in Fig. 2.

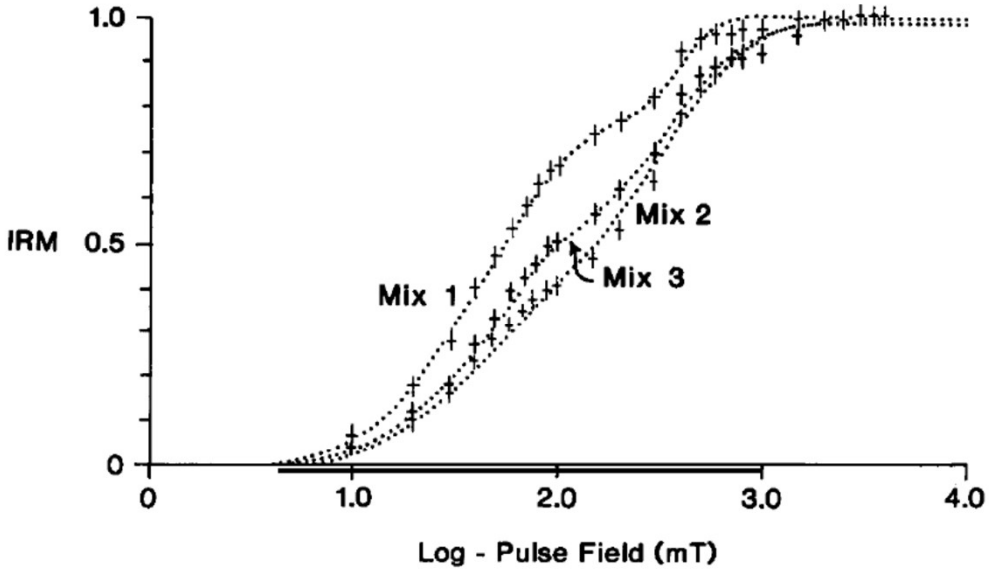


Fig. 2. Normalised IRM acquisition curves for three mixtures containing magnetite, haematite and goethite dispersed in different proportions in a non-magnetic matrix.