

Fig. 1

A

$$\text{Quantity Cys added} = C_{\text{cys}} * F + C_{\text{cys2}} * V$$

F= feed volume added [L]

C_{cys} = feed concentration (Cys) [g/L]

V= bioreactor volume [L]

C_{cys2} = medium concentration (Cys) [g/L]

B

$$\text{Quantity RC produced} = C_{\text{RC}} * V_{\text{F}}$$

RC = recombinant polypeptide

V_{F} = final bioreactor volume [L]

C_{RC} = final RC titer [g/L]

C

$$\text{Ratio Cys/RC\%} = \text{Quantity Cys added} * 100 / \text{Quantity RC produced}$$

Fig. 2

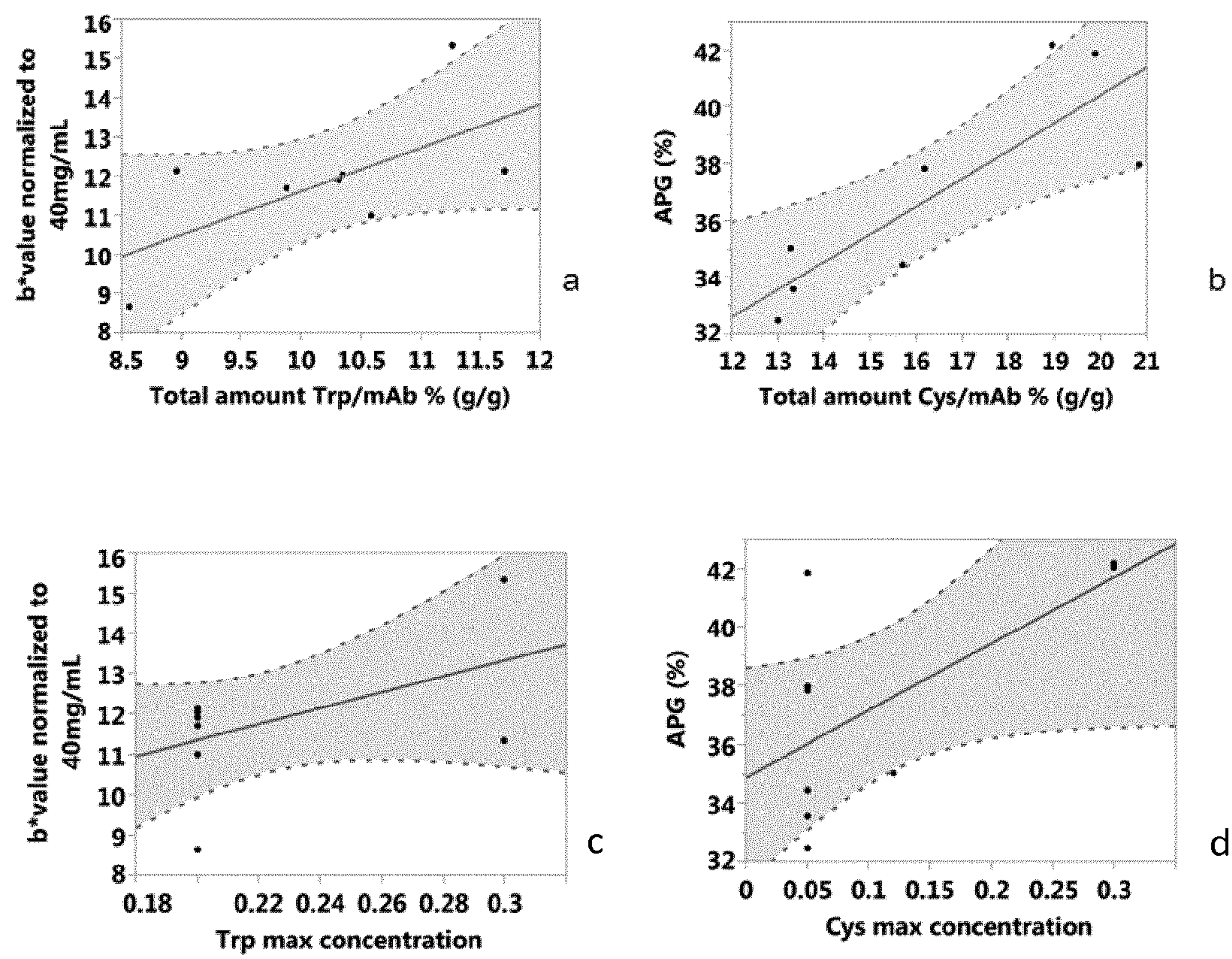


Fig. 3

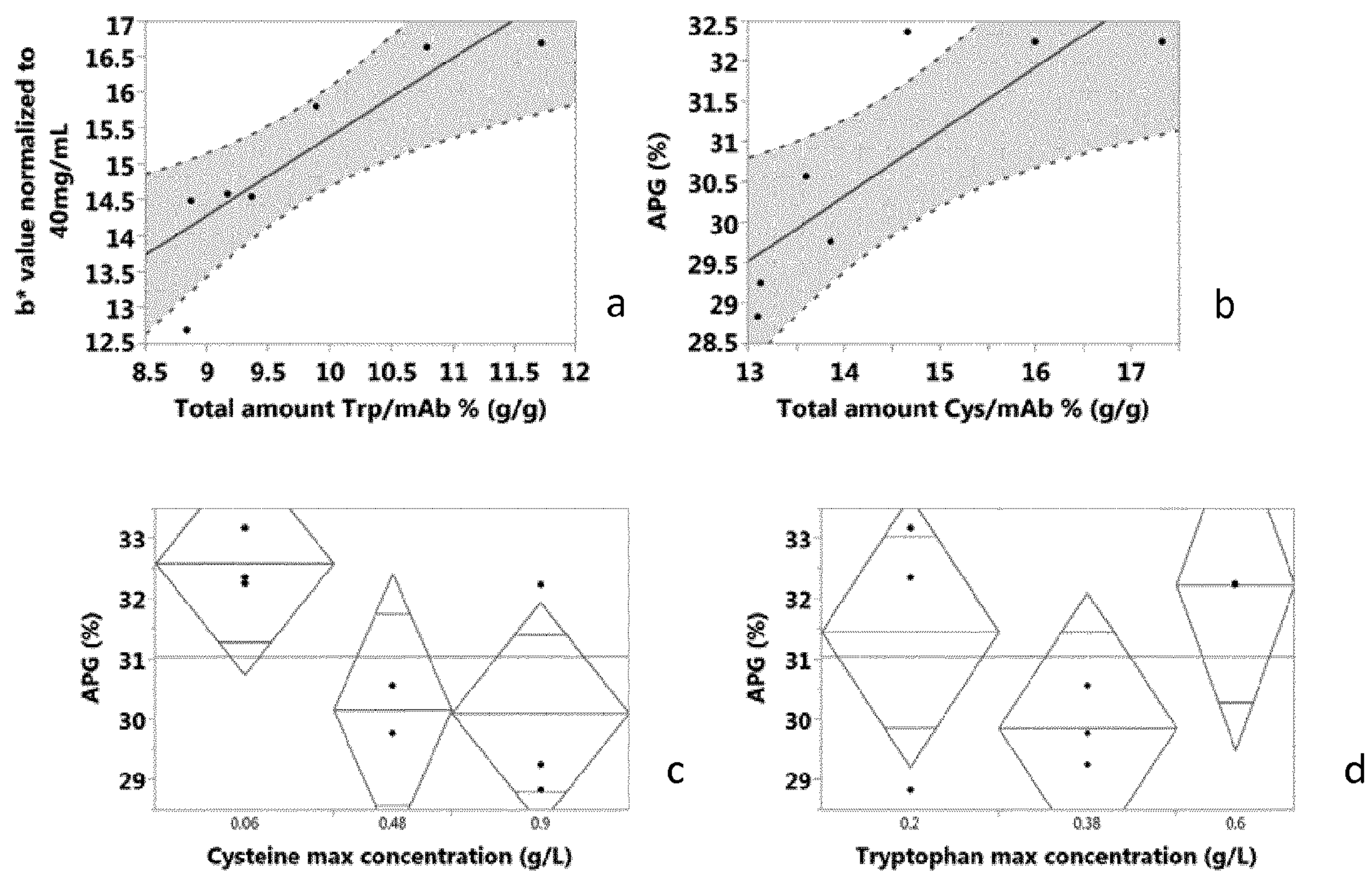


Fig. 4

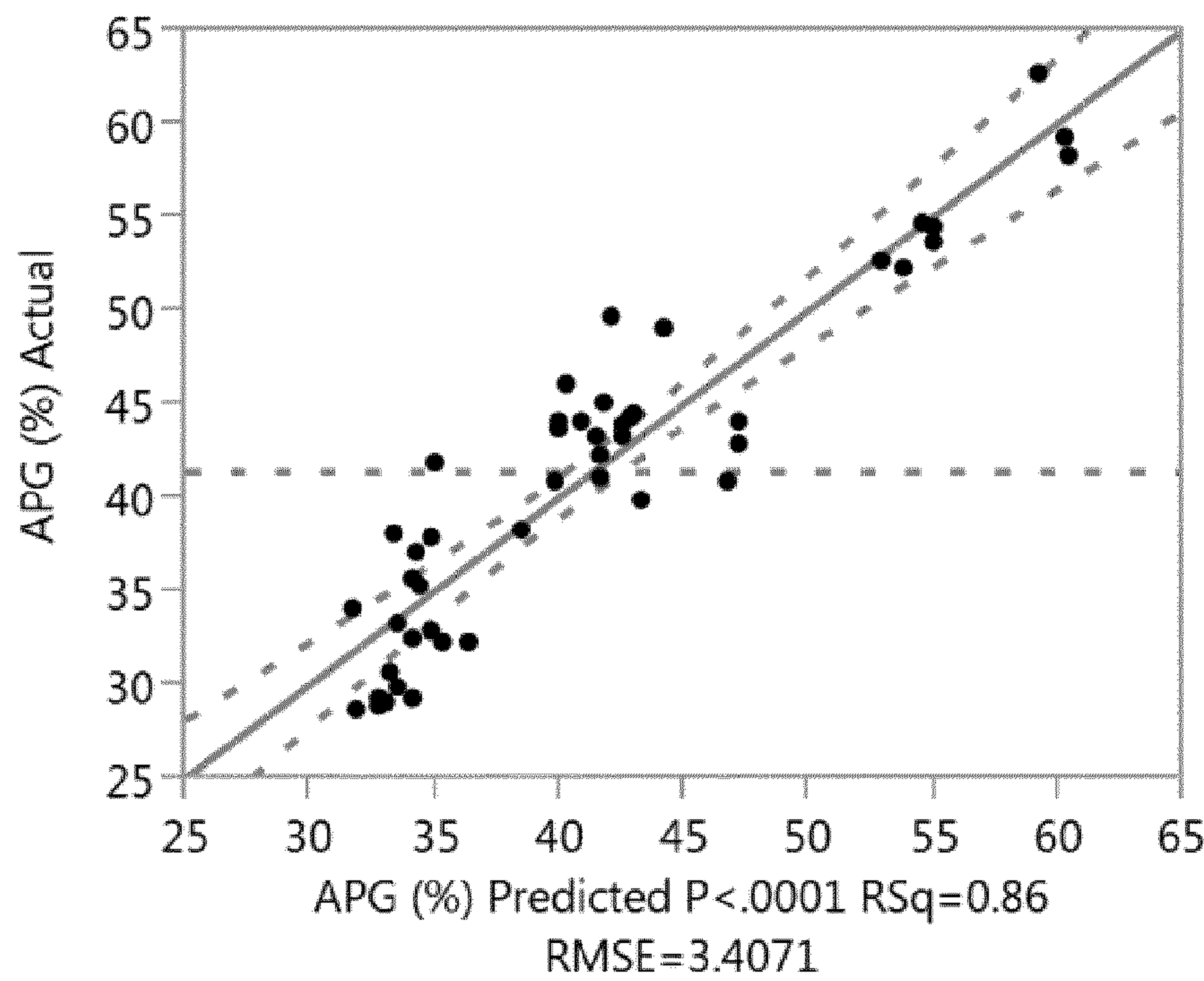


Fig. 5

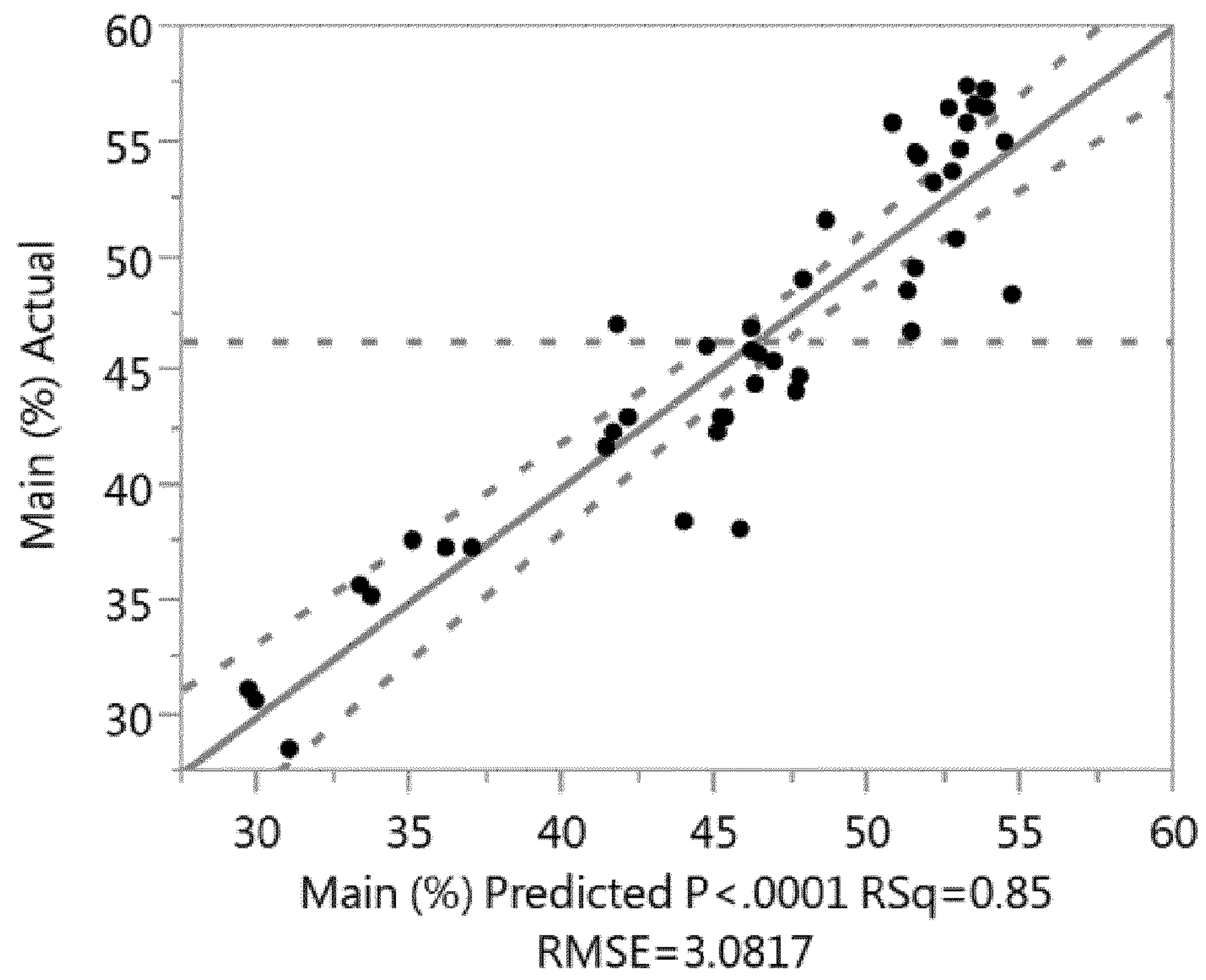


Fig. 6

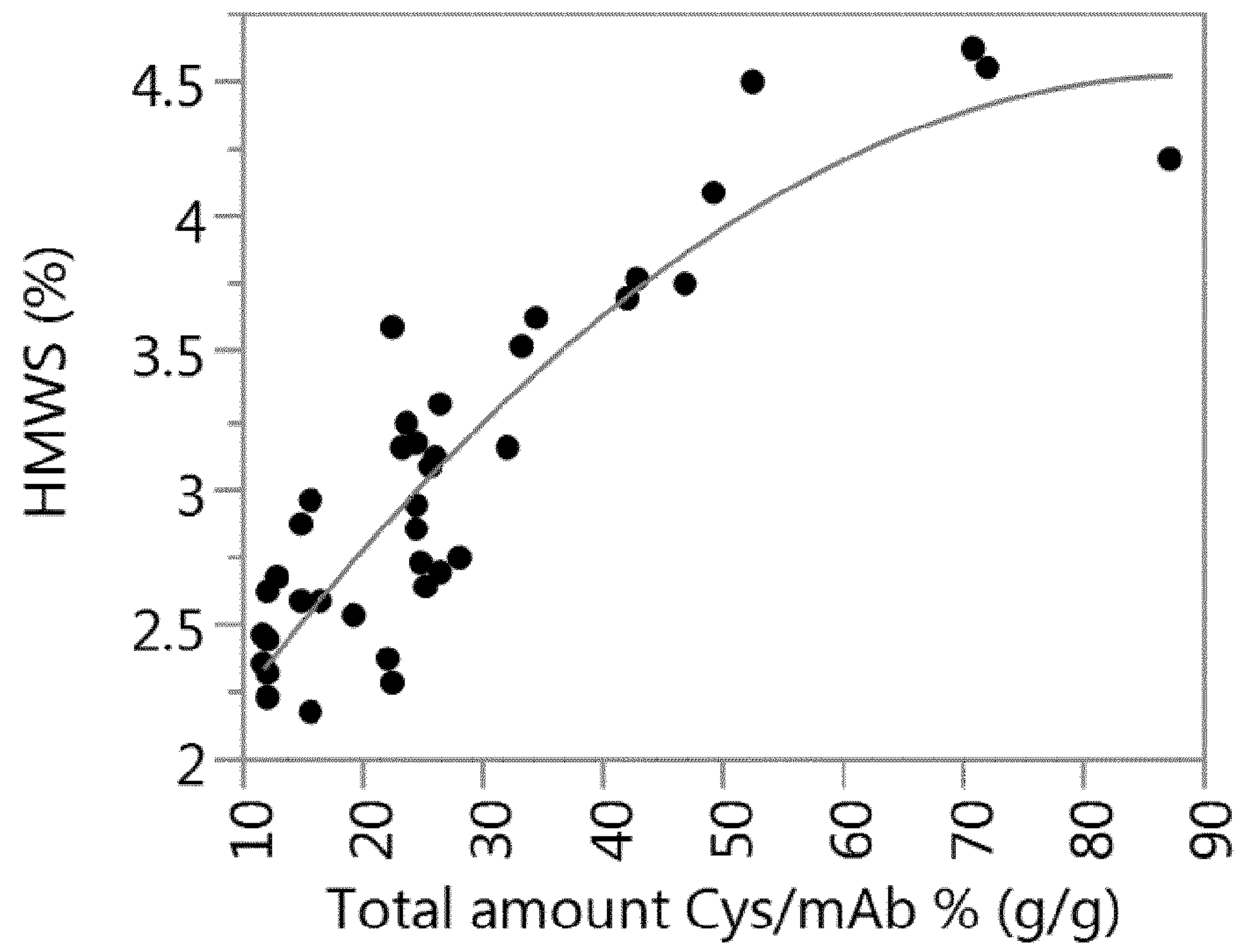


Fig. 7

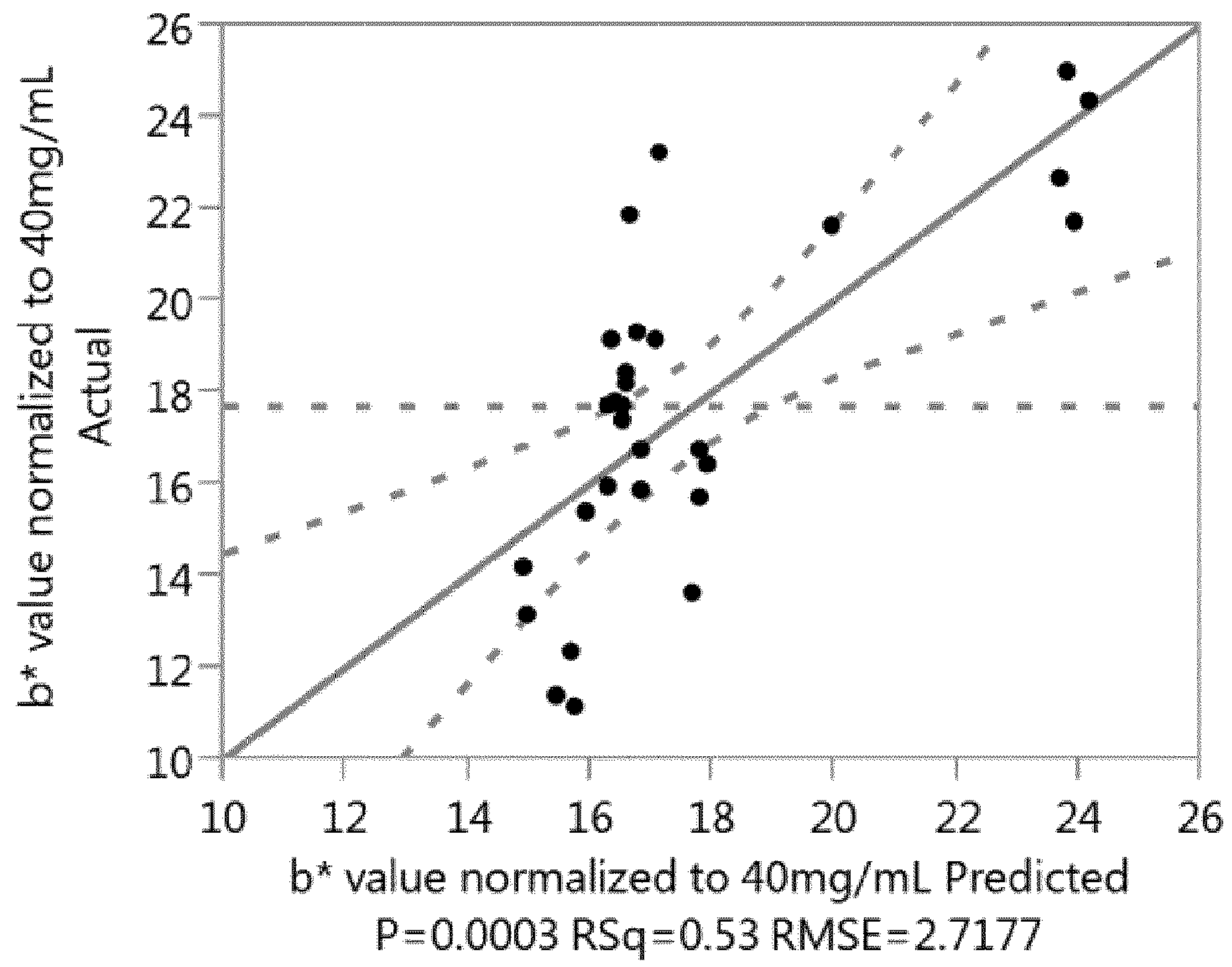
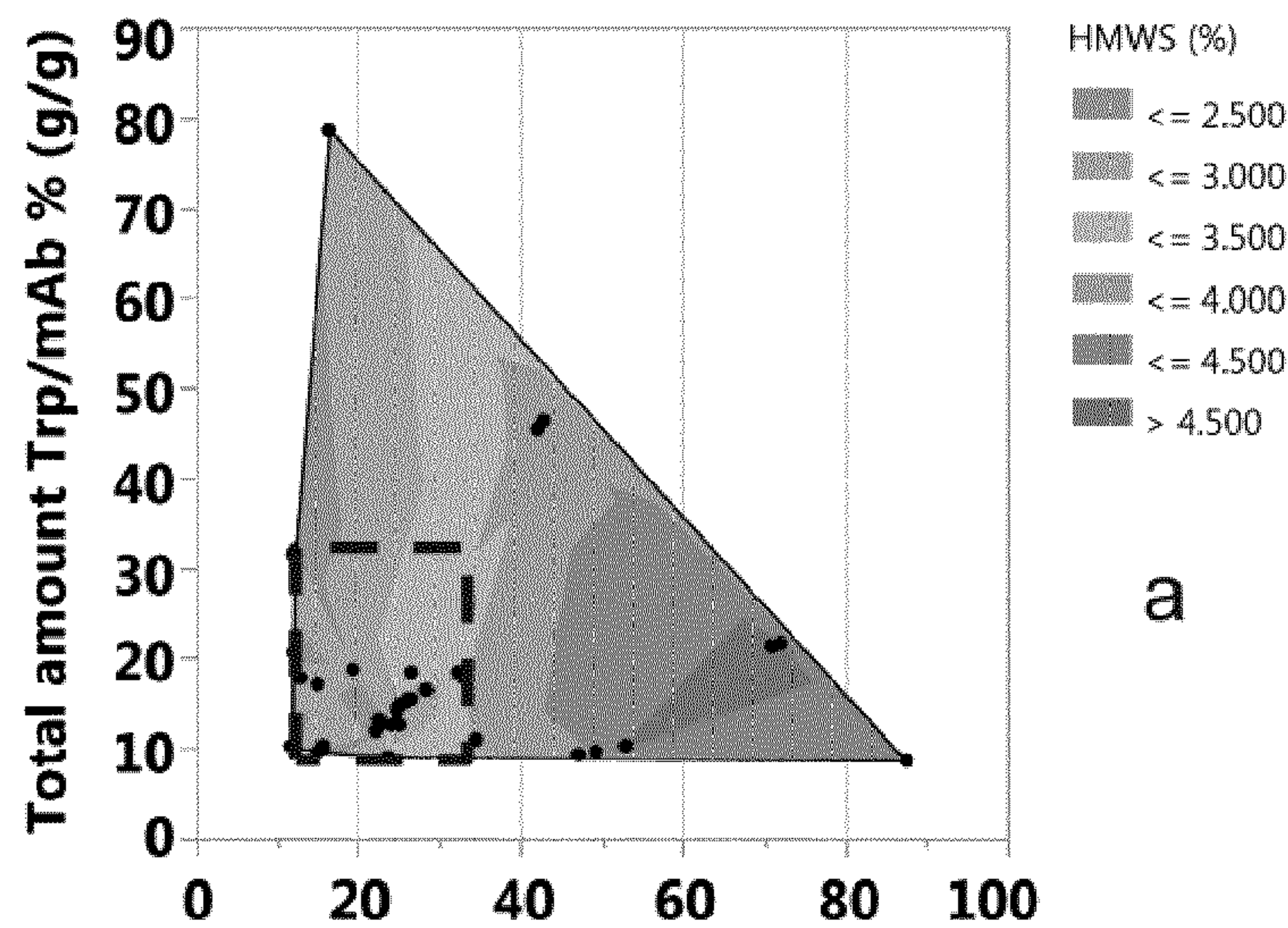
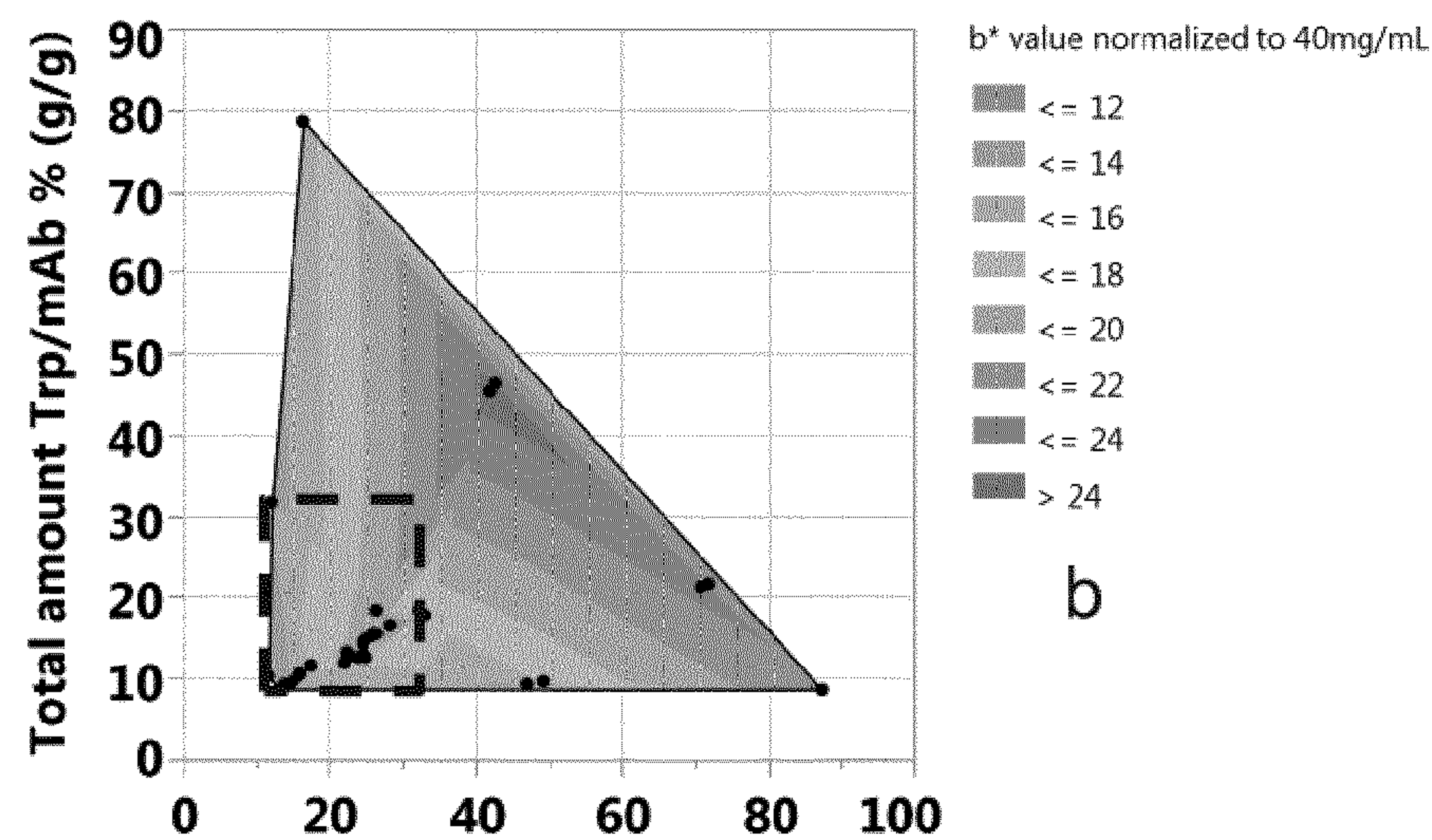


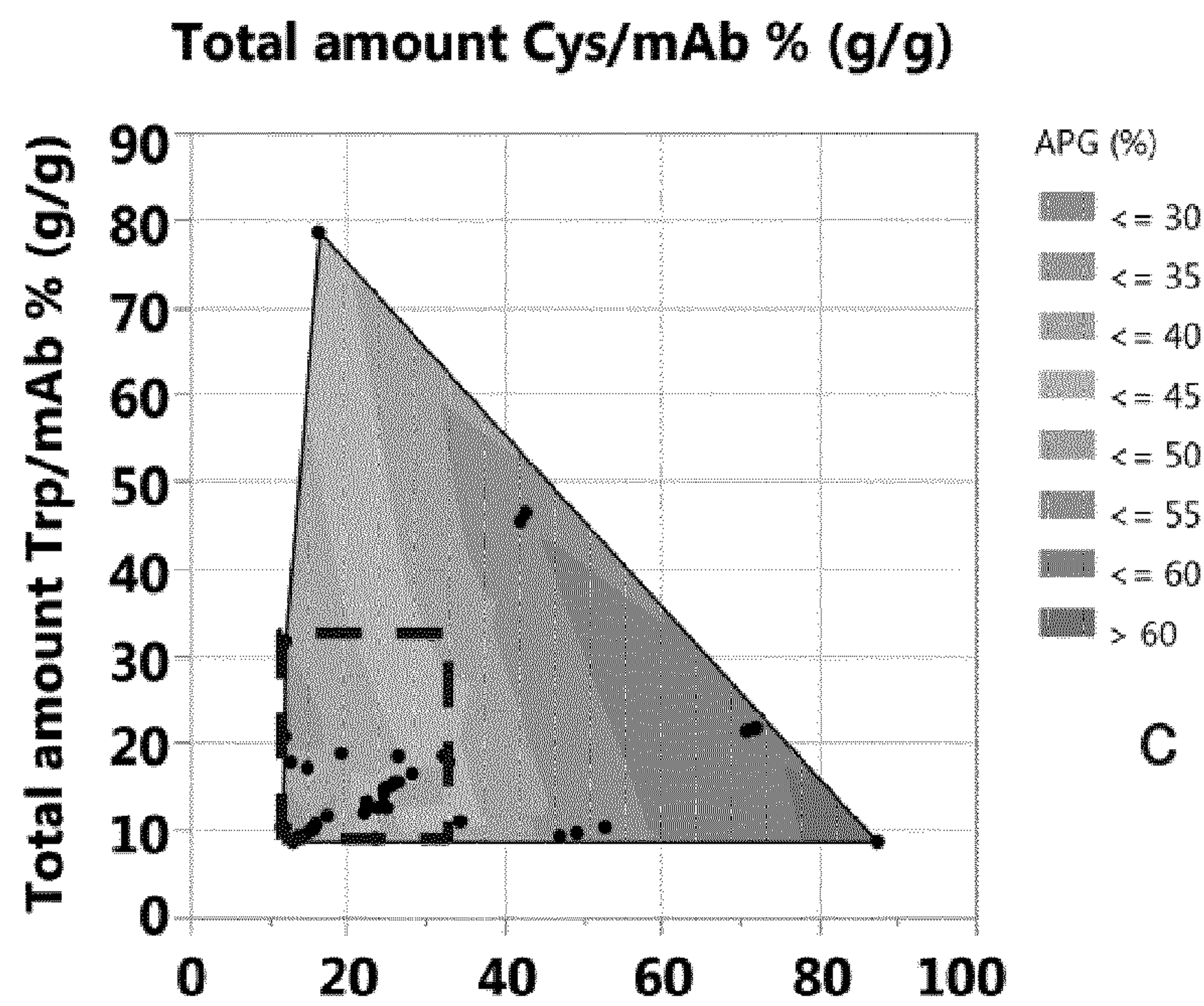
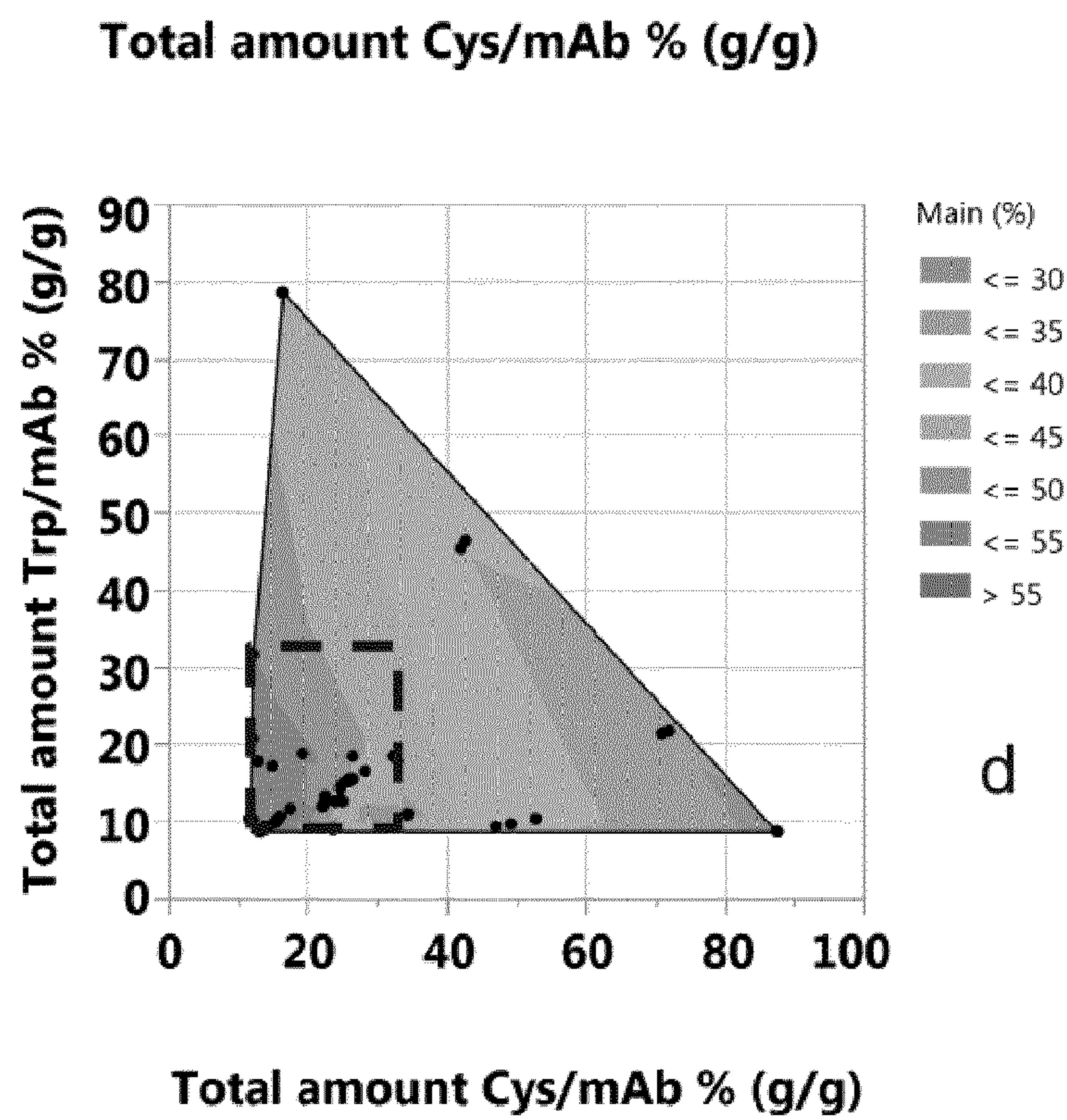
Fig. 8



a



b



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Fig 9

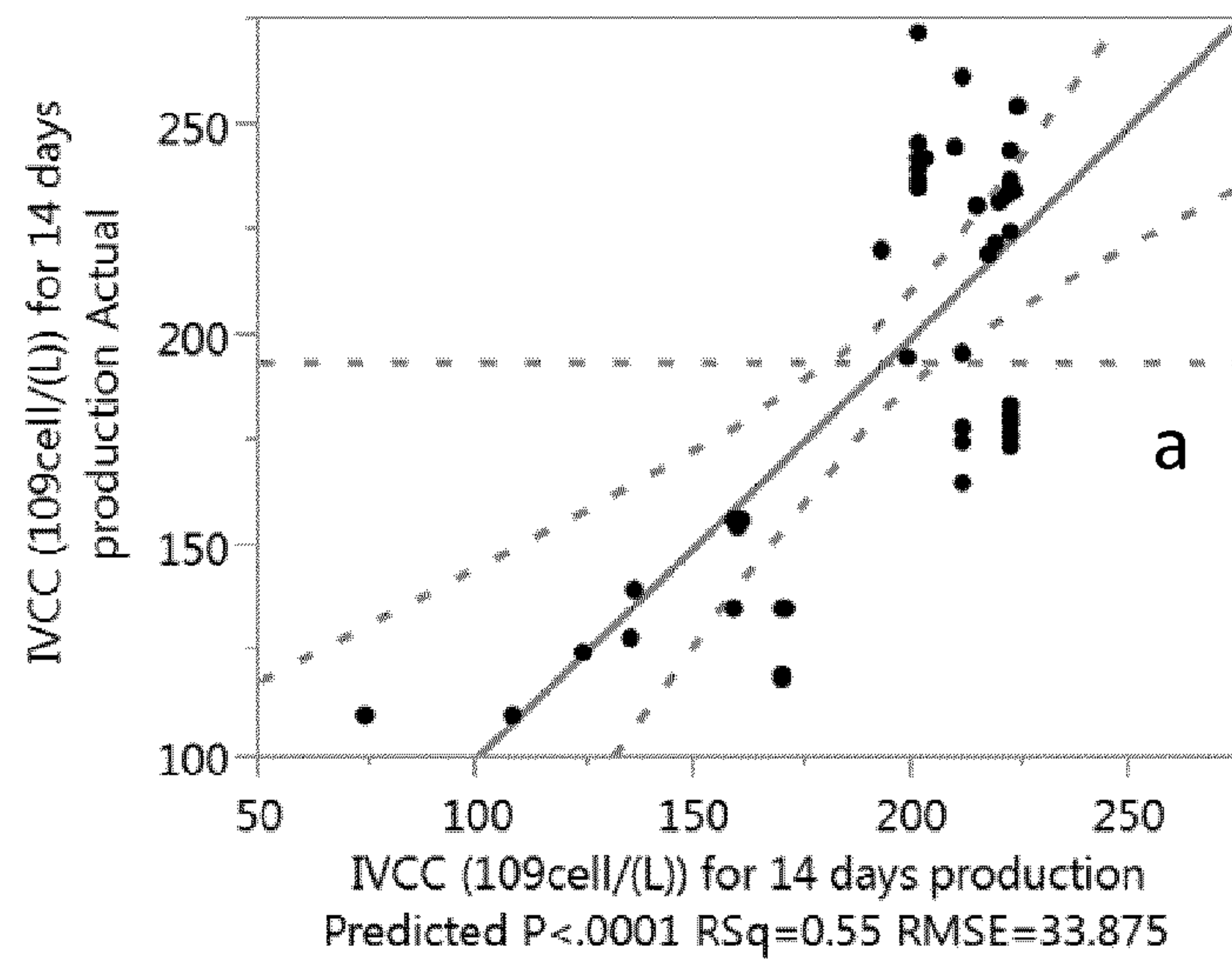
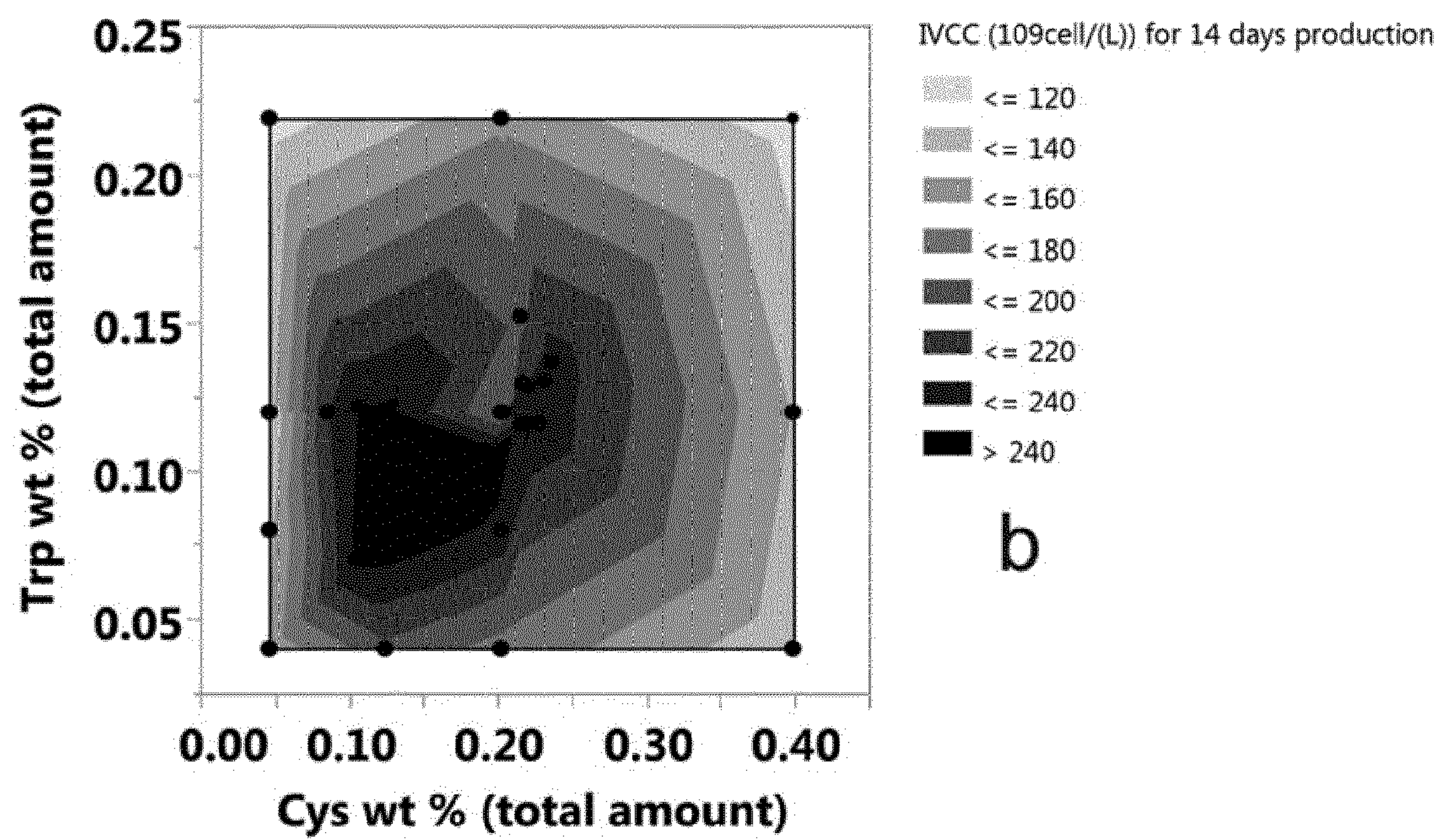


Fig. 10

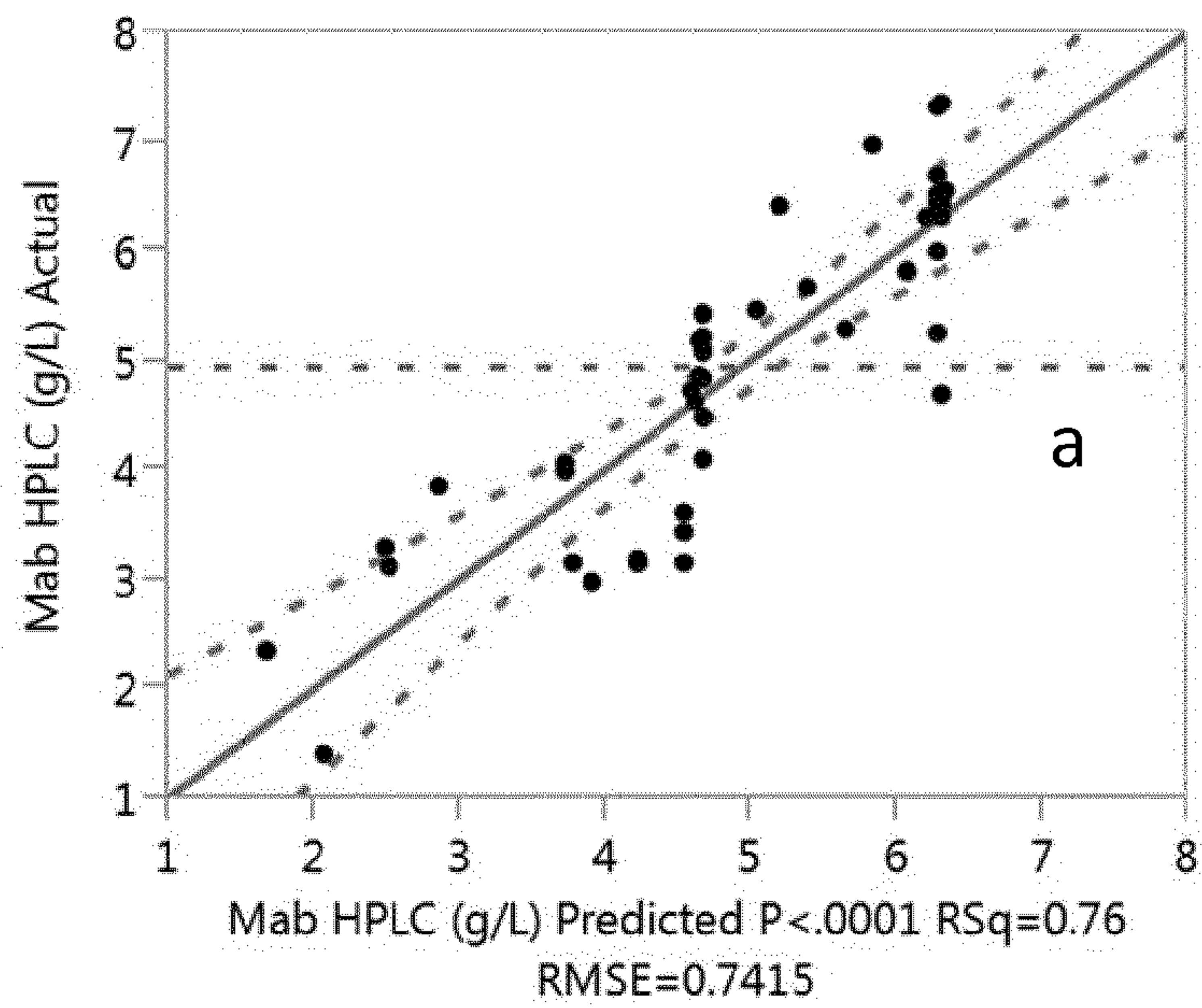
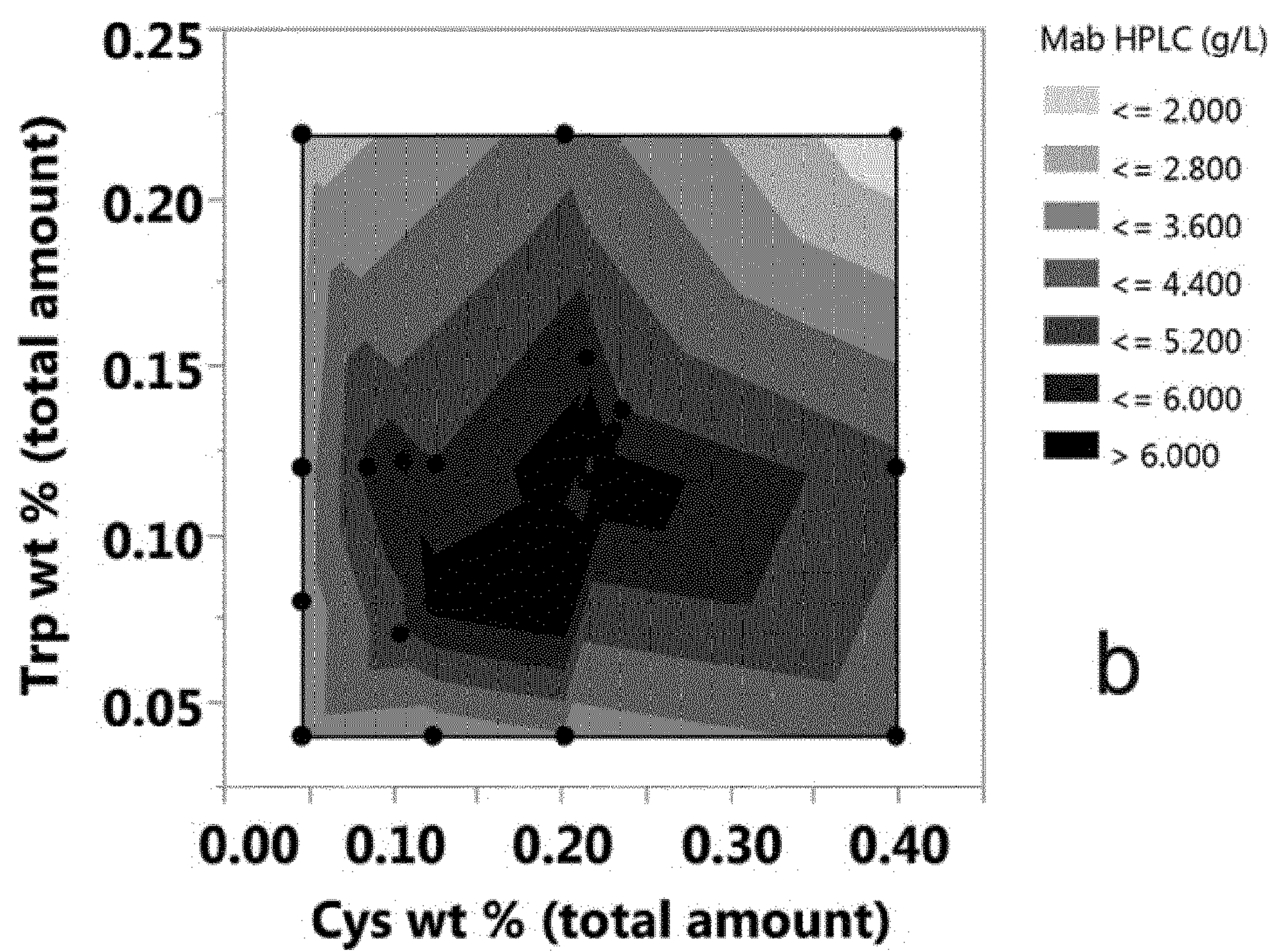
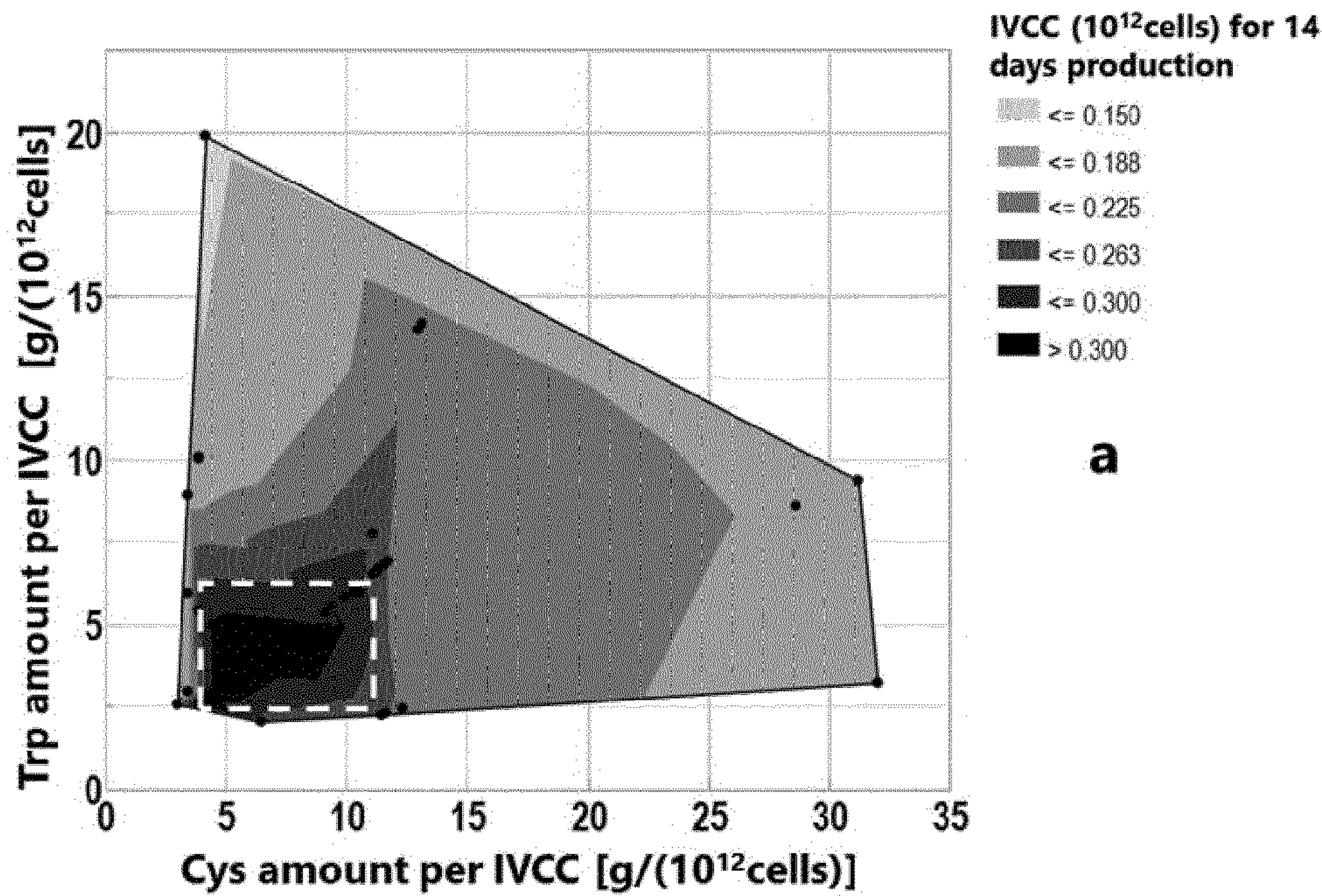
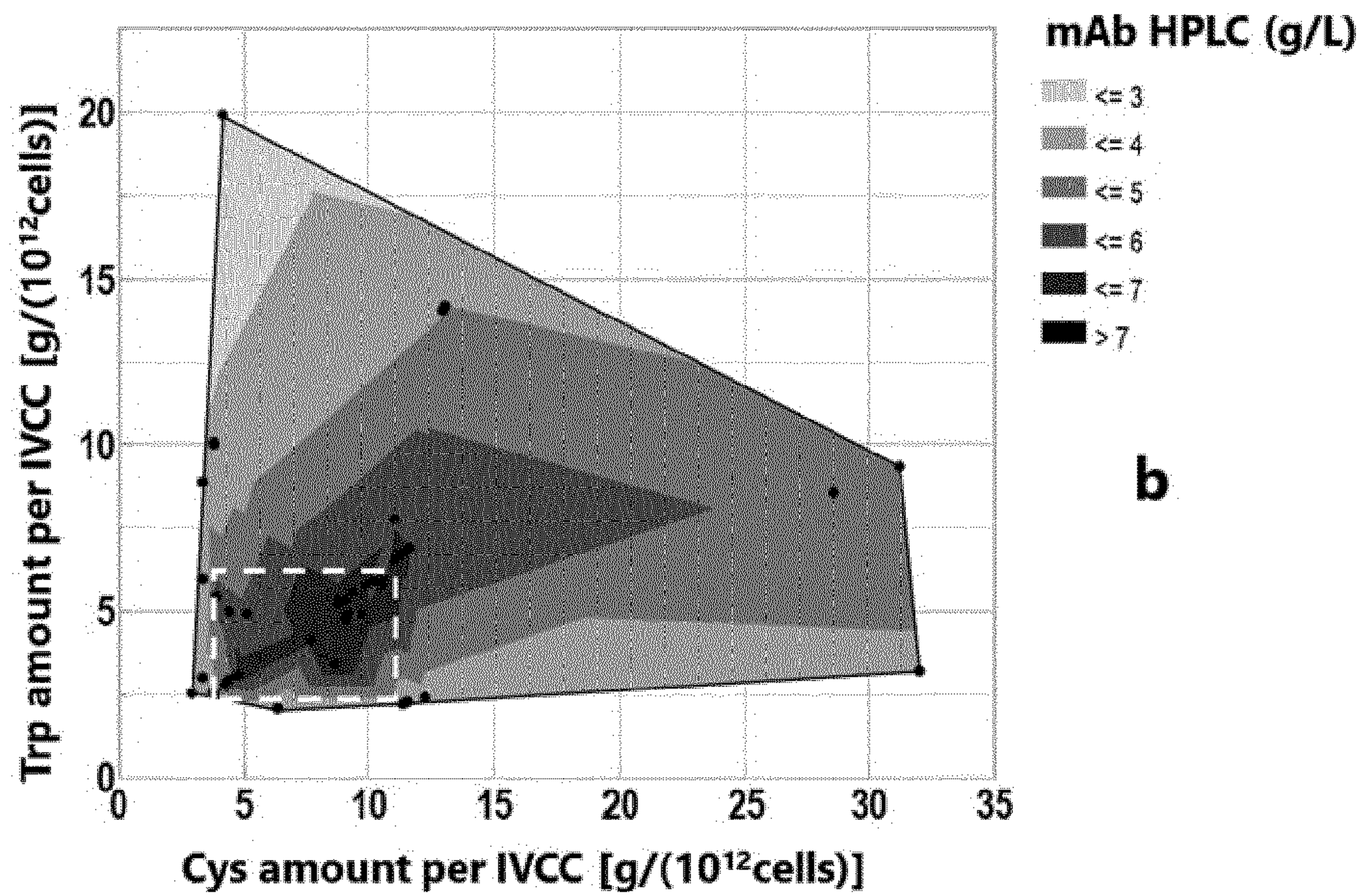


Fig. 11



$$\text{Cys amount per IVCC} = \frac{\text{Quantity Cys added}}{\text{IVCC} * 10^{-12}}$$

$$\text{Trp amount per IVCC} = \frac{\text{Quantity Trp added}}{\text{IVCC} * 10^{-12}}$$

c

Fig. 12

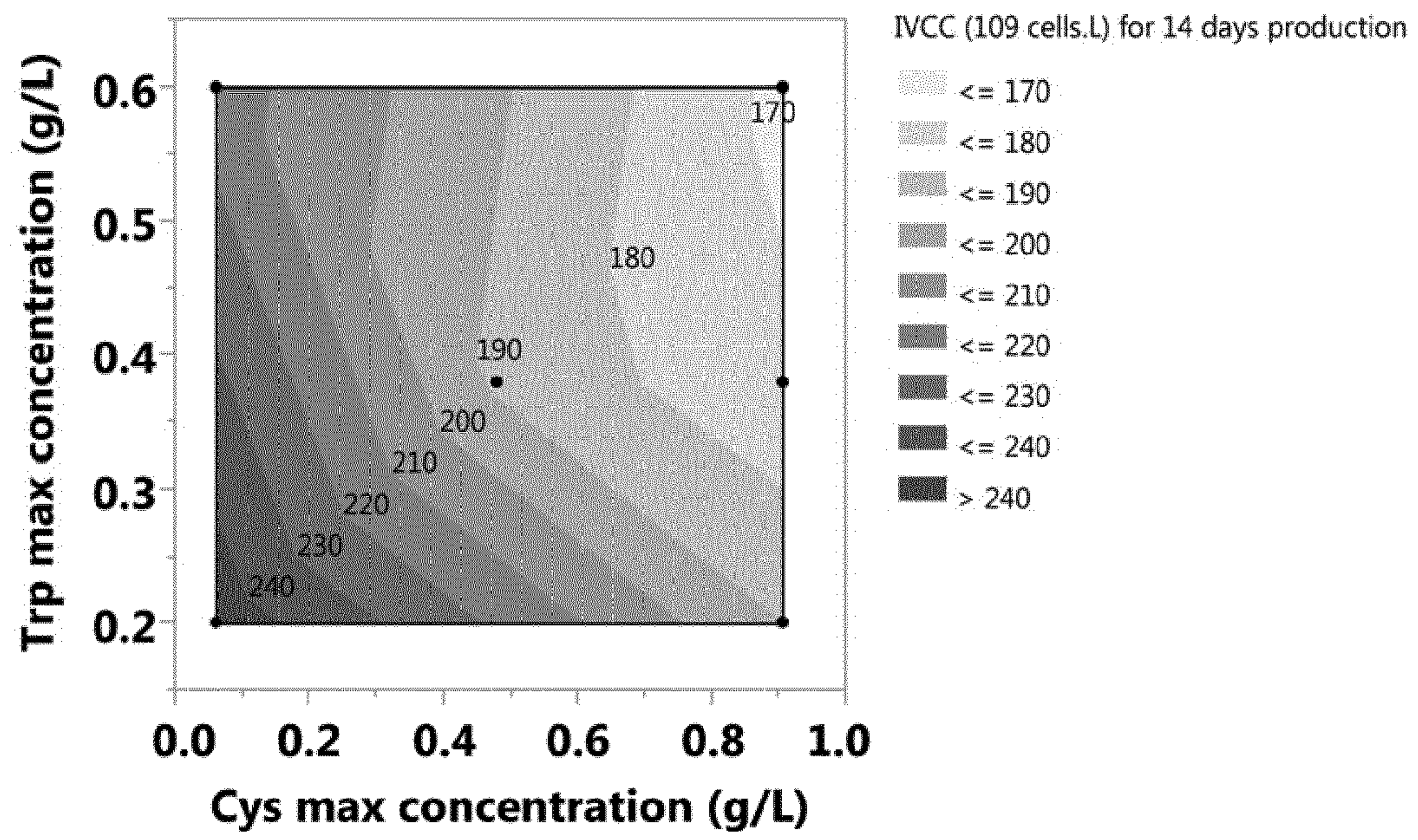


Fig. 13

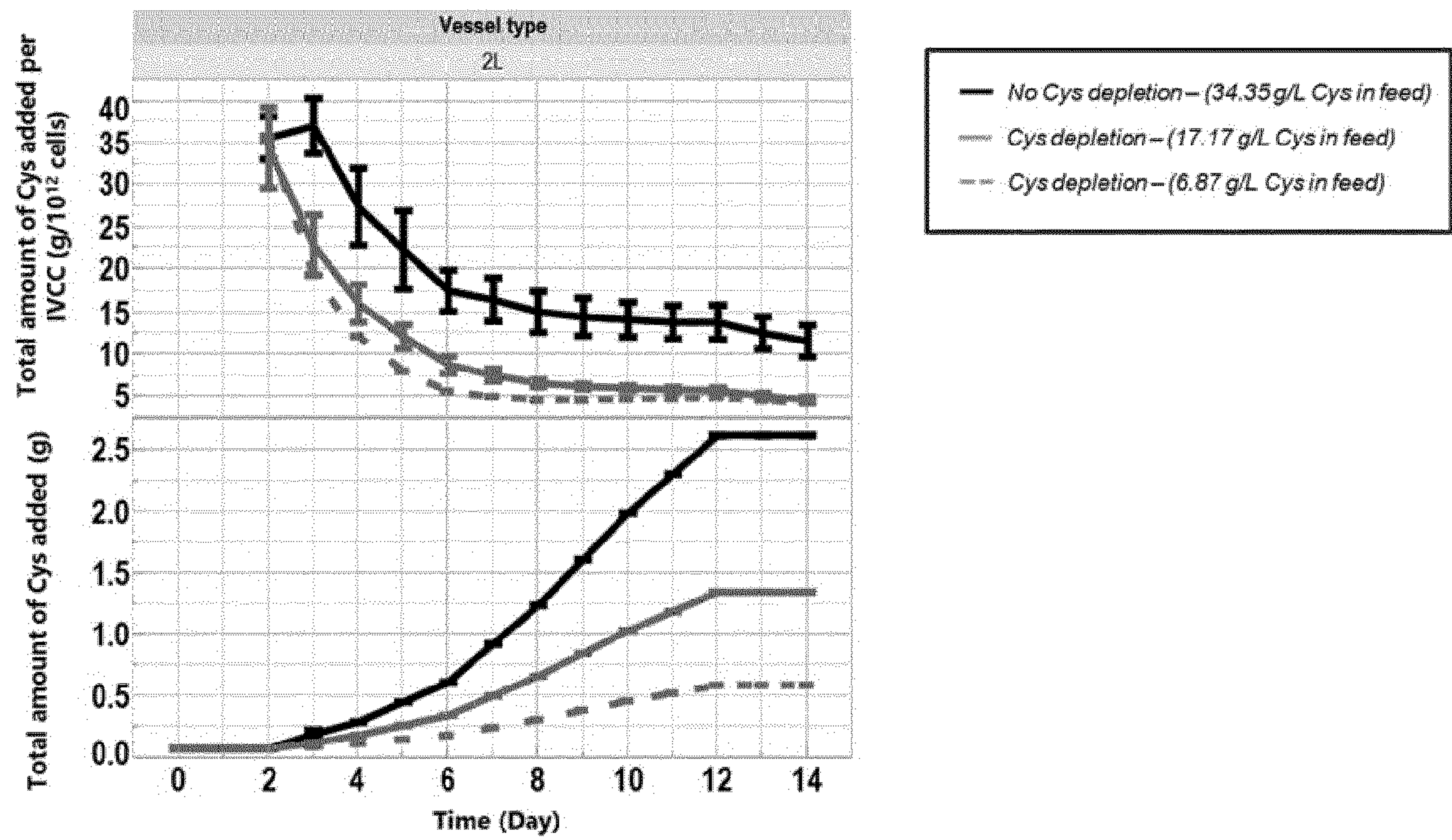


Fig. 14

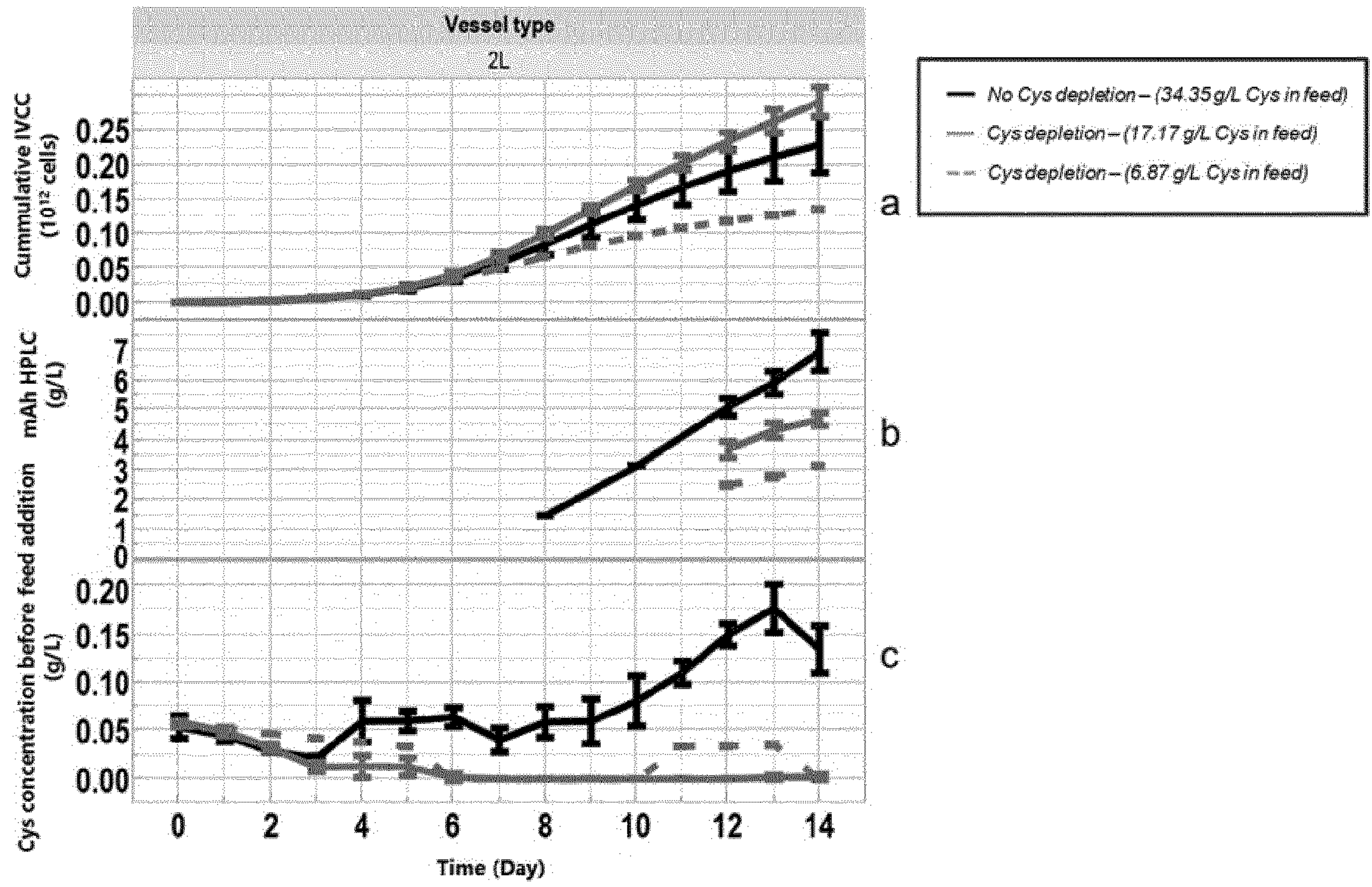


Fig. 15

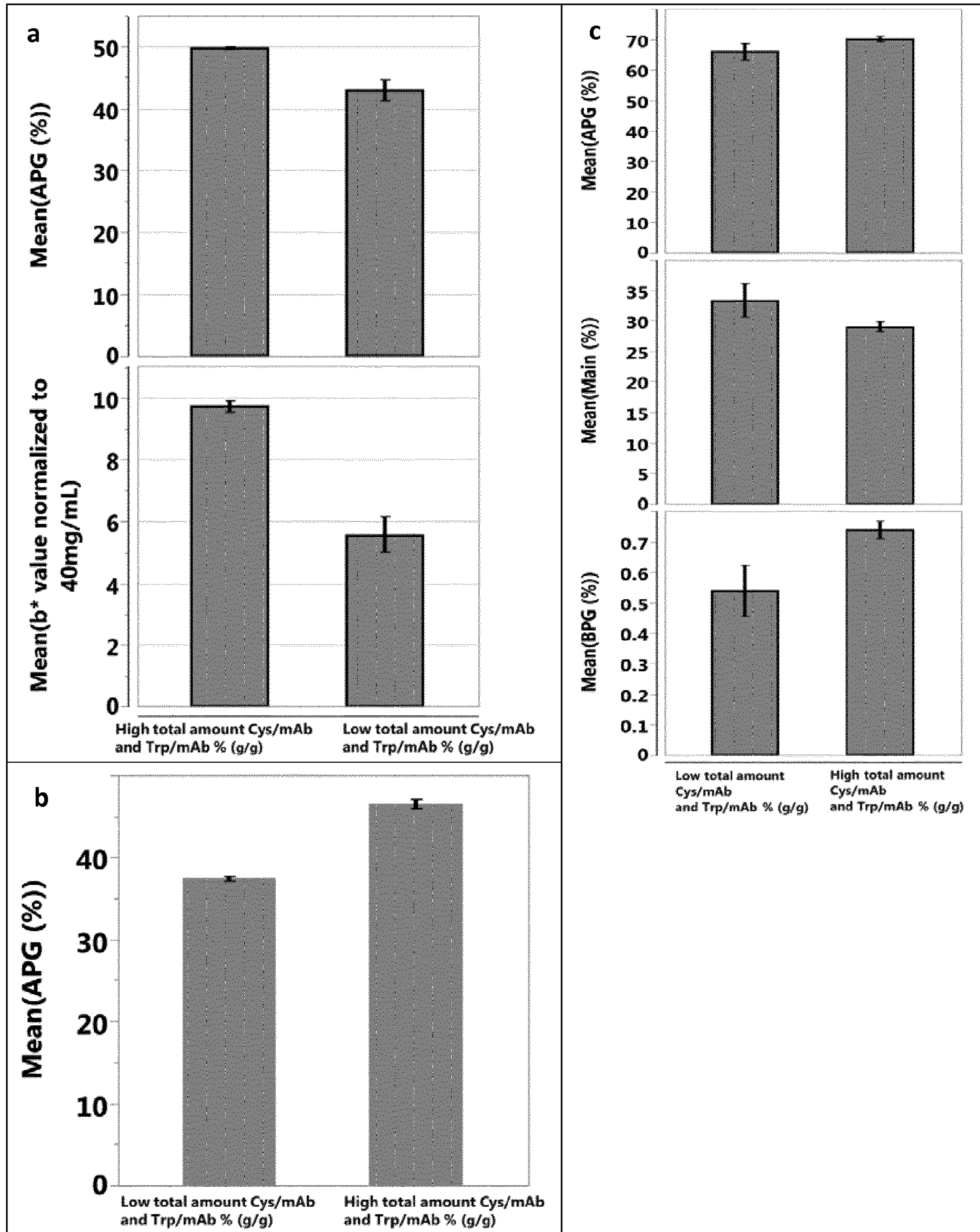
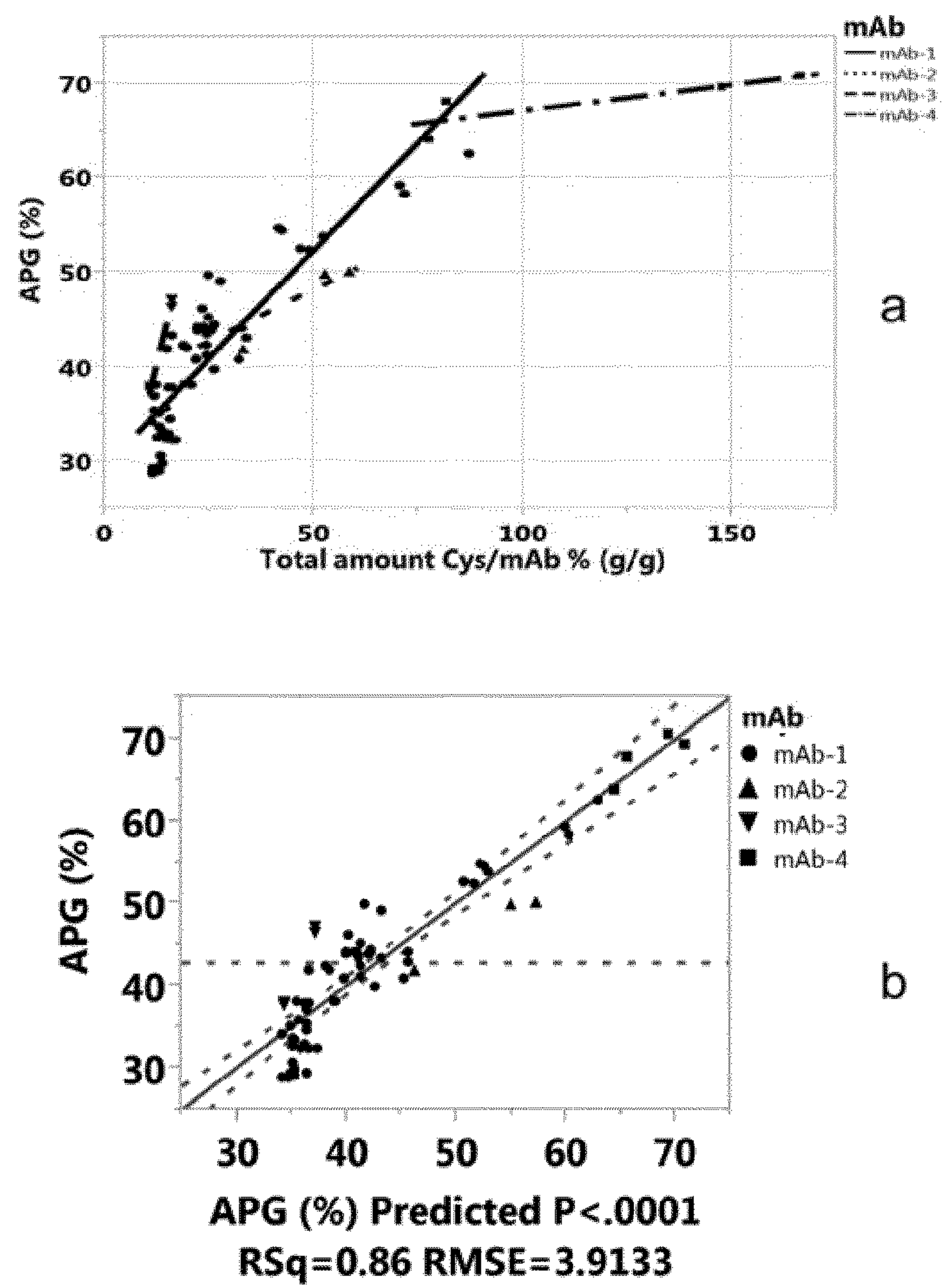


Fig. 16



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Fig 17

$$APG (\%) = \frac{RATIO\ Cys/RC\% * 70.76}{RATIO\ Cys/RC\% + 47.53} + \frac{RATIO\ Trp/RC\% * 3}{RATIO\ Trp/RC\% + 1} + 17$$

Fig 18

