50

50

50

50

100

AFE=2.56, AAFE=2.56, Tag=poor 40 40 20 20 20 -50 20 40 10 20 30 10 30 50 10 30 50 时间 (h) 时间 (h) 时间 (h) 浓度预测 组 19 浓度预测 组 20 浓度预测 组 21 观测 组 19 观测 组 20 观测 组 21 120 140 -平均预测 - 平均预测 平均预测 120 ---- 5th % --- 5th % --- 5th %--- 95th % --- 95th % --- 95th % 120 -100 AFE=1.90, AAFE=1.90, Tag=good AFE=0.07, AAFE=13.65, Tag=poor AFE=1.35, AAFE=1.41, Tag=good 100 · 100 -80 (mg/L) 80 - 60 · 80 (mg/L)(mg/L)60 茂 60-40 40 40 20 20 -20 -0 30 30 60 30 10 20 40 50 10 20 50 10 20 40 50 时间(h) 时间 (h) 时间 (h) 浓度预测 组 22 浓度预测 组 23 浓度预测 组 24 160 观测 组 22 观测 组 23 观测 组 24 140 140 · - 平均预测 - 平均预测 - 平均预测 140 ---- 5th % --- 5th % --- 5th % 120 ---- 95th % --- 95th % --- 95th % 120 -AFE=5.53, AAFE=5.53, Tag=poor AFE=1.12, AAFE=1.27, Tag=good AFE=0.62, AAFE=1.61, Tag=good 120 -100 -100 -100 -(mg/L) (mg/L) (mg/L) 次度 - 09 **※ 60 -**40 -40 40 · 20 20 -20 -0 -10 20 30 10 20 30 50 20 40 60 80 100 时间 (h) 时间(h) 时间(h) 浓度预测 组 25 浓度预测 组 26 浓度预测 组 27 • 观测组25 ● 观测组 26 ● 观测 组 27 100 · - 平均预测 - 平均预测 — 平均预测 120 · 120 ---- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % AFE=0.98, AAFE=1.28, Tag=good AFE=0.58, AAFE=2.01, Tag=poor AFE=0.96, AAFE=1.12, Tag=good 100 80 -100 -80 80 -次度 (mg/L) (mg/L) 60 浓度 40 -40 -40 20 · 20 20 0 -10 20 30 50 20 40 60 80 100 10 20 30 50

时间(h) 时间(h) 时间(h) 浓度预测 组 28 浓度预测 组 29 浓度预测 组 30 • 观测组28 • 观测组29 ● 观测组 30 100 -140 · - 平均预测 一 平均预测 - 平均预测 100 ---- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % 120 -AFE=0.66, AAFE=1.51, Tag=good AFE=0. 25, AAFE=4. 03, Tag=poor AFE=1.92, AAFE=1.92, Tag=good 80 -80 -100 -(mg/L) 60 -(mg/L)(mg/L)60 80 -浓度 **※ 60 -**40 -40 20 10 20 30 50 10 20 30 40 10 20 30 40 50 时间(h) 时间 (h) 时间(h) 浓度预测 组 32 浓度预测 组 31 浓度预测 组 33 观测 组 33 观测 组 31 观测 组 32 140 平均预测 平均预测 平均预测 140 · 100 --- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % 120 -120 -AFE=0.80, AAFE=2.68, Tag=poor $AFE=0.\,91,\ AAFE=1.\,43,\ Tag=good$ AFE=0.81, AAFE=1.26, Tag=good 80 100 100 -浓度 (mg/L) (mg/L) 80 60 80 -送 60-**松 60** 40 40 40 · 20 20 · 20 -0 -30 20 60 100 10 20 30 10 20 50 时间(h) 时间(h) 时间(h) 浓度预测 组 35 浓度预测 组 34 浓度预测 组 36 • 观测组34 ● 观测组35 • 观测组36 100 -140 -平均预测 - 平均预测 120 · 平均预测 --- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % 120 -AFE=0.94, AAFE=1.27, Tag=good AFE=0.32, AAFE=3.16, Tag=poor AFE=4.97, AAFE=4.97, Tag=poor 100 80 -100 80 (mg/L) (mg/L)(mg/L)60 60 浓度 送 60 40 40 40

20 20 20 100 30 30 10 20 10 20 20 60 时间(h) 时间(h) 时间 (h) 浓度预测 组 37 浓度预测 组 38 浓度预测 组 39 • 观测组38 • 观测组37 • 观测组39 140 -平均预测 120 平均预测 平均预测 60 --- 5th % --- 5th % --- 5th % 120 · --- 95th % --- 95th % --- 95th % AFE=0.58, AAFE=1.73, Tag=good AFE=0.89, AAFE=1.26, Tag=good AFE=1.14, AAFE=3.35, Tag=poor 100 -100 80 40 浓度 (mg/L) 浓度 (mg/L) $(\mathsf{mg/L})$ 60 送 製 30 40 20 40 20 -10 20 · 0 20 60 100 10 20 30 10 30 时间(h) 时间(h) 时间 (h) 浓度预测 组 40 浓度预测 组 41 浓度预测 组 42 观测 组 40 观测 组 41 观测 组 42 120 平均预测 平均预测 平均预测 120 120 ---- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % 100 · AFE=2.50, AAFE=2.50, Tag=poor $AFE=1.\,94,\ AAFE=1.\,94,\ Tag=good$ $AFE=1.\ 26,\ AAFE=1.\ 32,\ Tag=good$ 100 -100 -80 80 80 -(mg/L) 80 80 浓度 (mg/L) $(\mathsf{mg/L})$ 60 60 40 40 40 20 20 20 -

60 50 30 60 20 30 40 50 40 10 20 40 10 20 60 80 100 时间(h) 时间(h) 时间(h) 浓度预测 组 43 浓度预测 组 44 浓度预测 组 45 观测 组 43 ● 观测组44 观测 组 45 100 120 -平均预测 平均预测 140 -平均预测 --- 5th % --- 5th % --- 5th % --- 95th % --- 95th %--- 95th %120 -100 AFE=0.87, AAFE=1.34, Tag=good AFE=1.24, AAFE=1.24, Tag=good AFE=1.44, AAFE=1.44, Tag=good 80 100 -80 (mg/L)80 -60 浓度 沃 60-40 40 -20 20 20 -

0 -时间(h) 时间(h) 时间(h) 浓度预测 组 46 浓度预测 组 47 浓度预测 组 48 120 -160 ● 观测组46 ● 观测组47 • 观测组48 140 -- 平均预测 - 平均预测 - 平均预测 140 · --- 5th % --- 5th % --- 5th % --- 95th % --- 95th % --- 95th % 120 -AFE=1.45, AAFE=1.71, Tag=good AFE=1.81, AAFE=2.38, Tag=poor AFE=0.96, AAFE=2.67, Tag=poor 120 -100 -100 (mg/L) 80 -(mg/L)80 60 40 · 40 20 -20 -

10

10

120

100

80

60

40

20

浓度

20

30

• 观测组50

- 平均预测

时间(h)

浓度预测 组 50

--- 5th %

--- 95th %

30

时间(h)

40

AFE=1.46, AAFE=1.62, Tag=good

50

50

10

10

120 -

100 ·

80 -

60 -

40

20 -

0 ·

(mg/L)

浓度

20

30

时间(h)

浓度预测 组 51

--- 5th %

--- 95th %

30

时间(h)

● 观测 组 51

一 平均预测

40

50

AFE=3.79, AAFE=3.79, Tag=poor

50

100 -

80 -

40

20 -

0 -

140 -

120 -

100 -

(mg/L) 80 60

40 -

20 -

0 -

10

20

30

时间(h)

20

40

60

• 观测组49

- 平均预测

时间(h)

浓度预测 组 49

--- 5th %

--- 95th %

80

AFE=0.28, AAFE=3.59, Tag=poor

50

100

(J/gm) 60 -

浓度