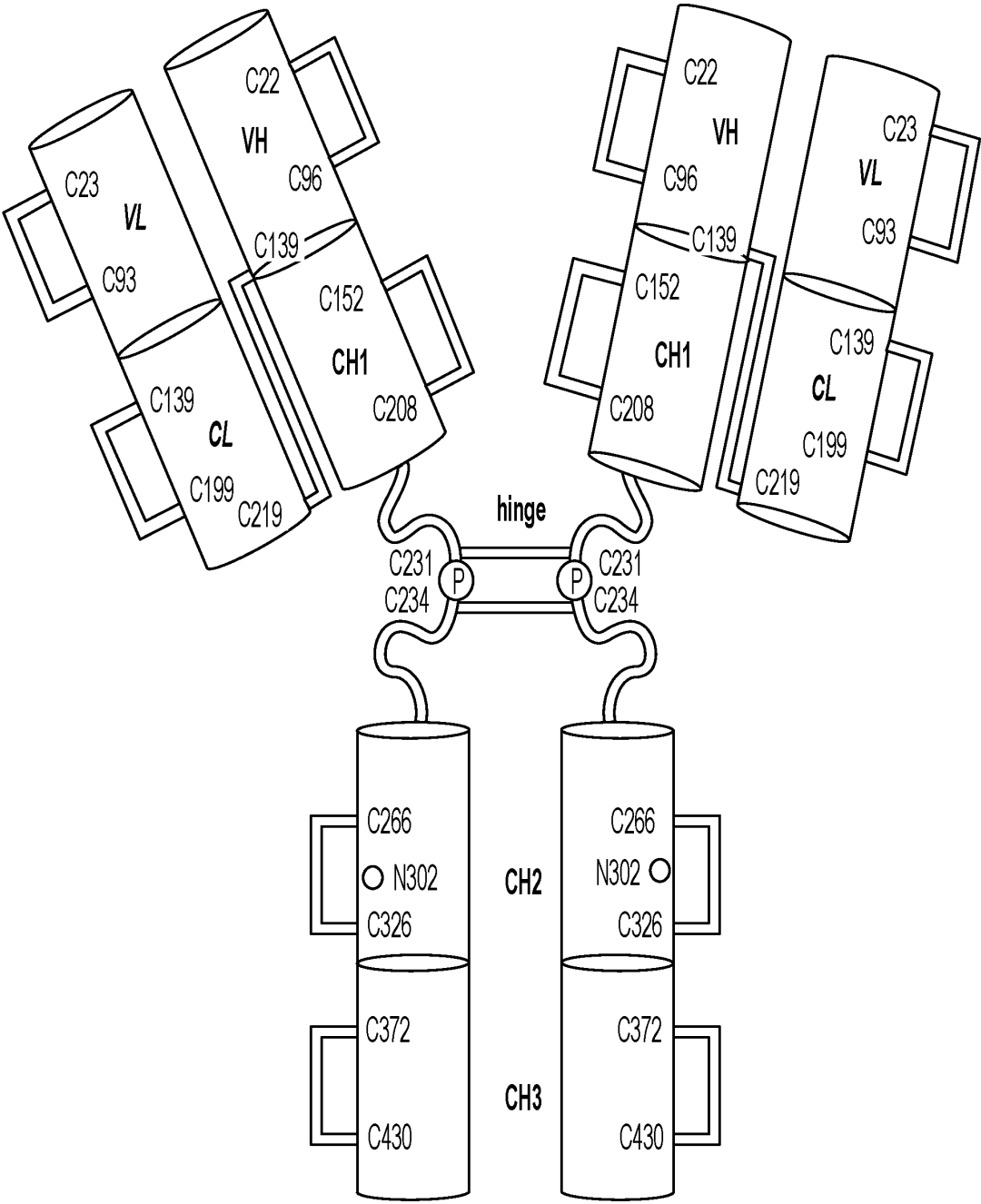
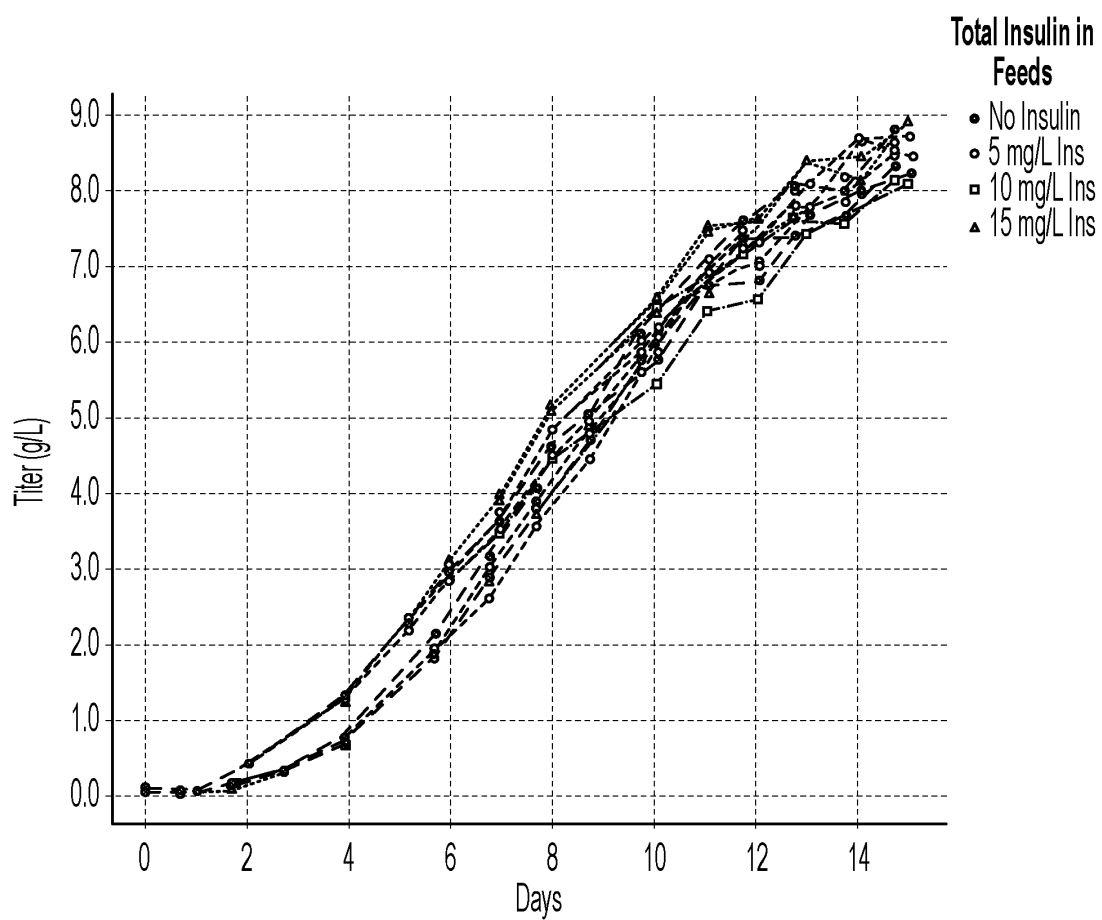


FIG. 1



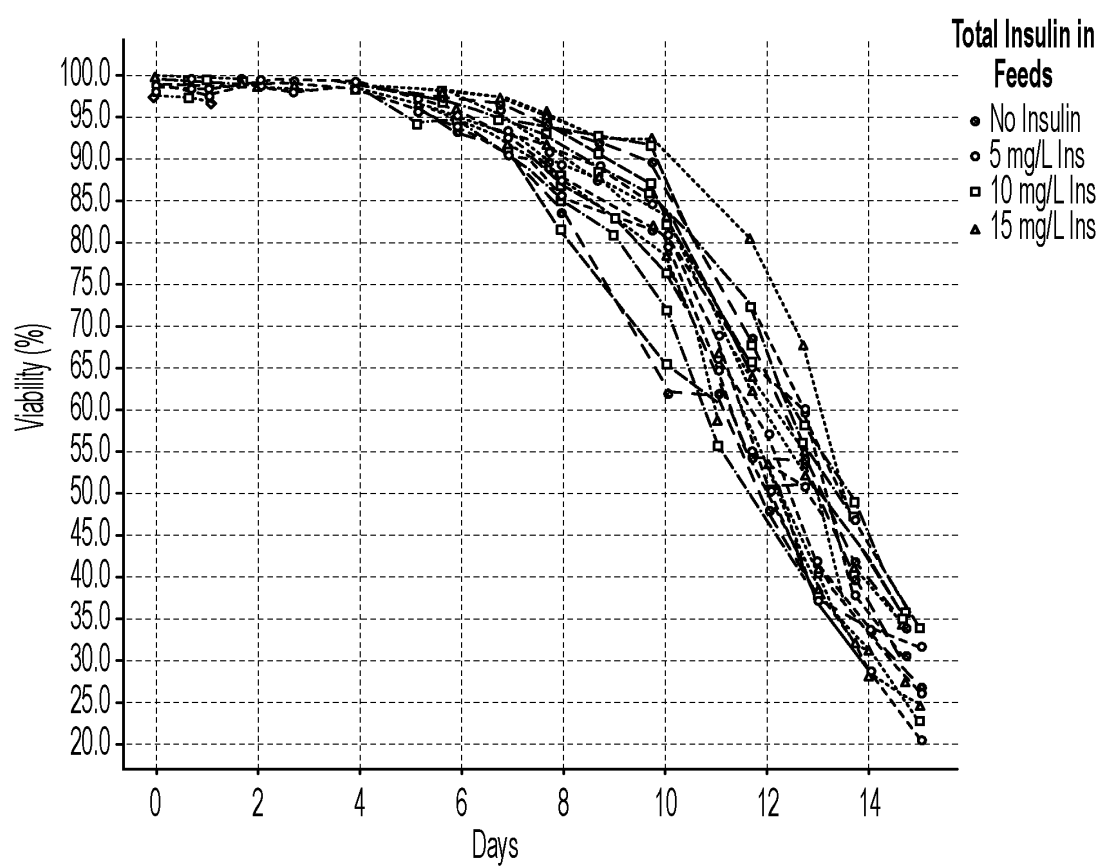
2/65

FIG. 2



3/65

FIG. 3



4/65

FIG. 4

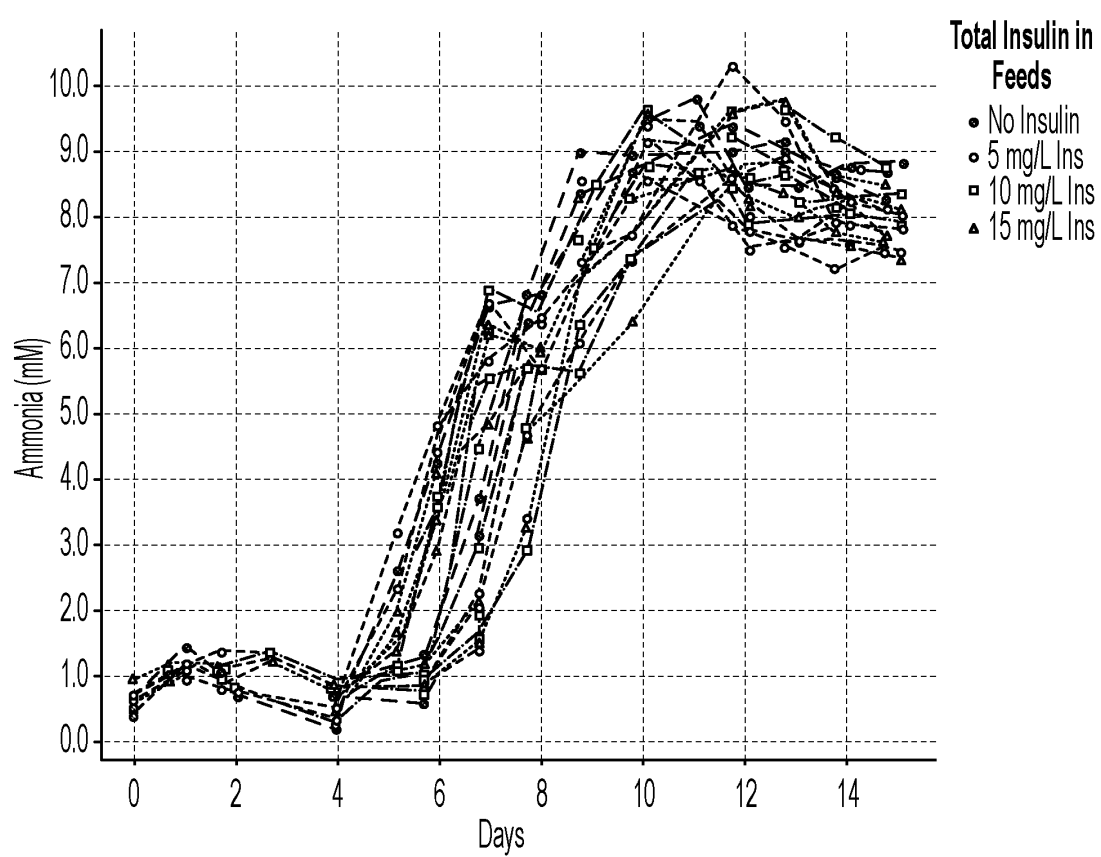


FIG. 5

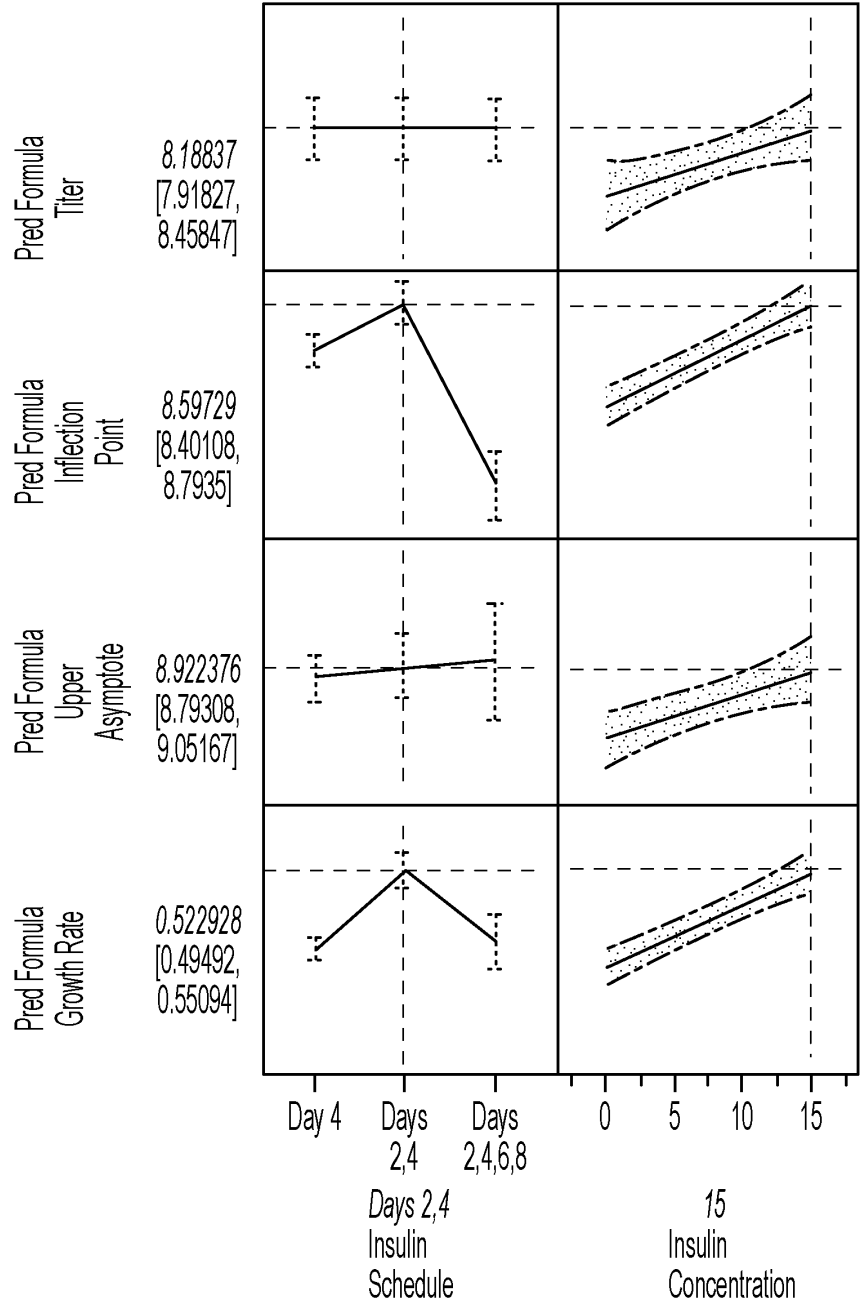
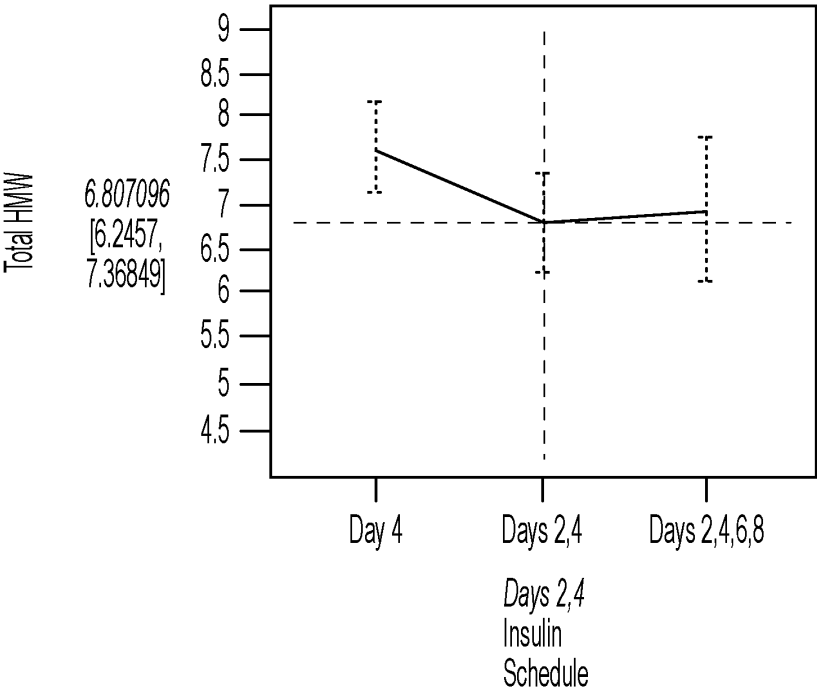


FIG. 6



7/65

FIG. 7

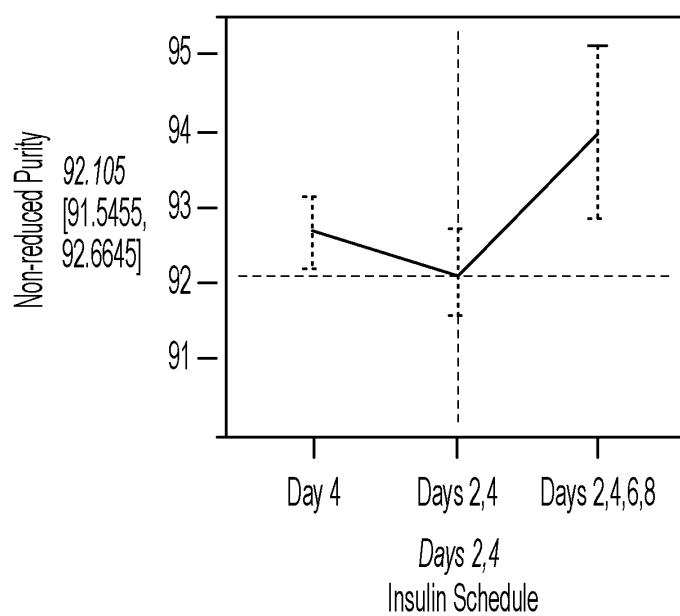


FIG. 8

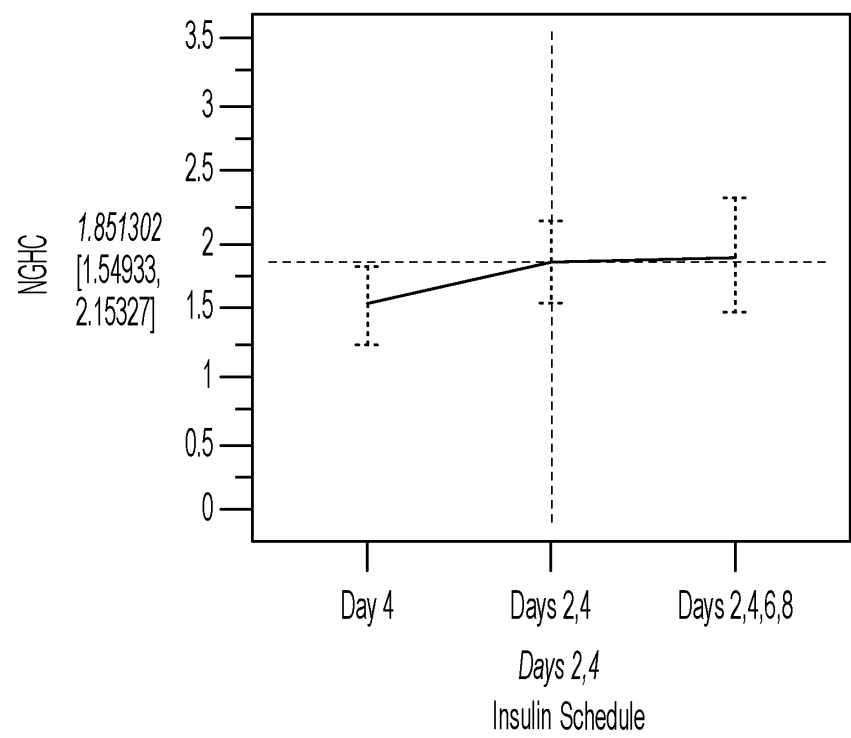


FIG. 9

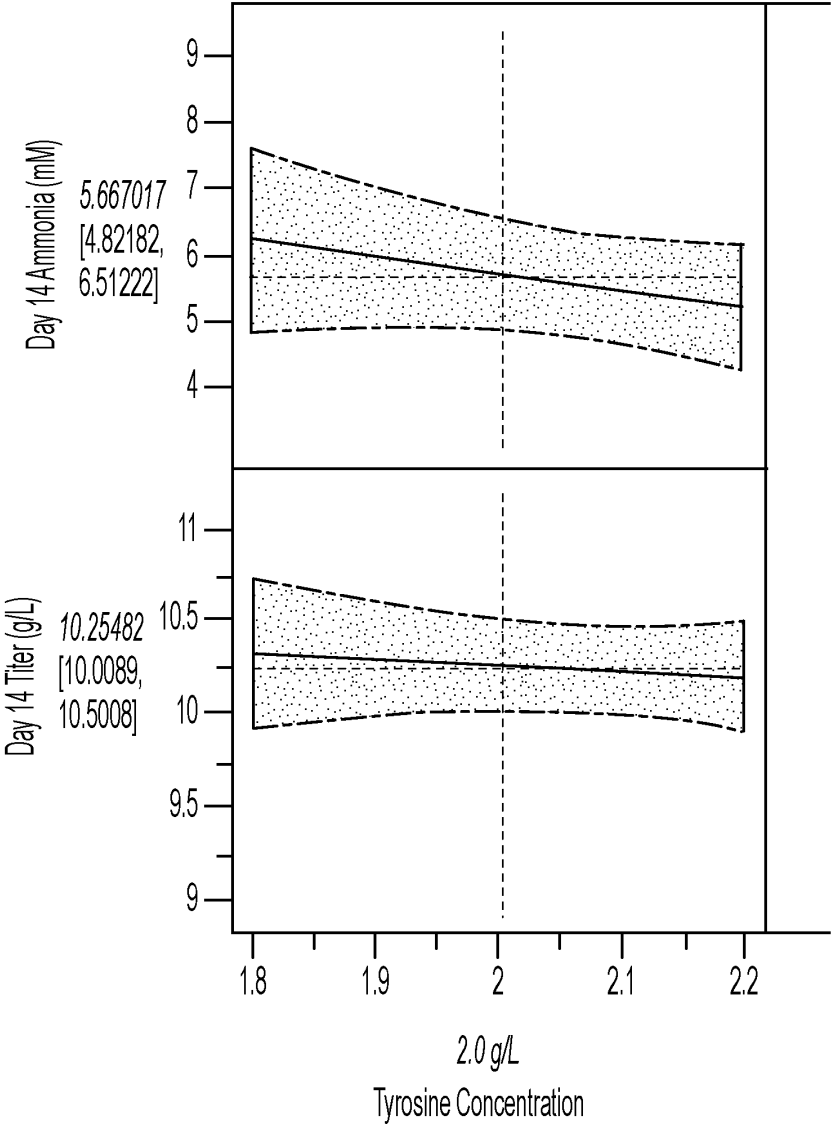
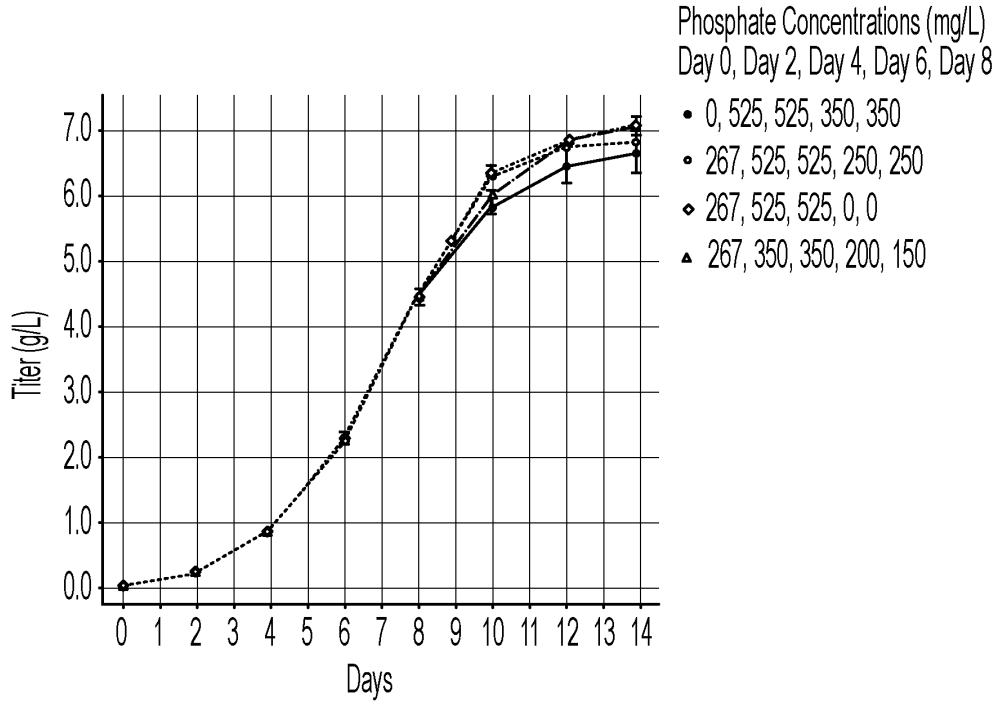


FIG. 10



11/65

FIG. 11

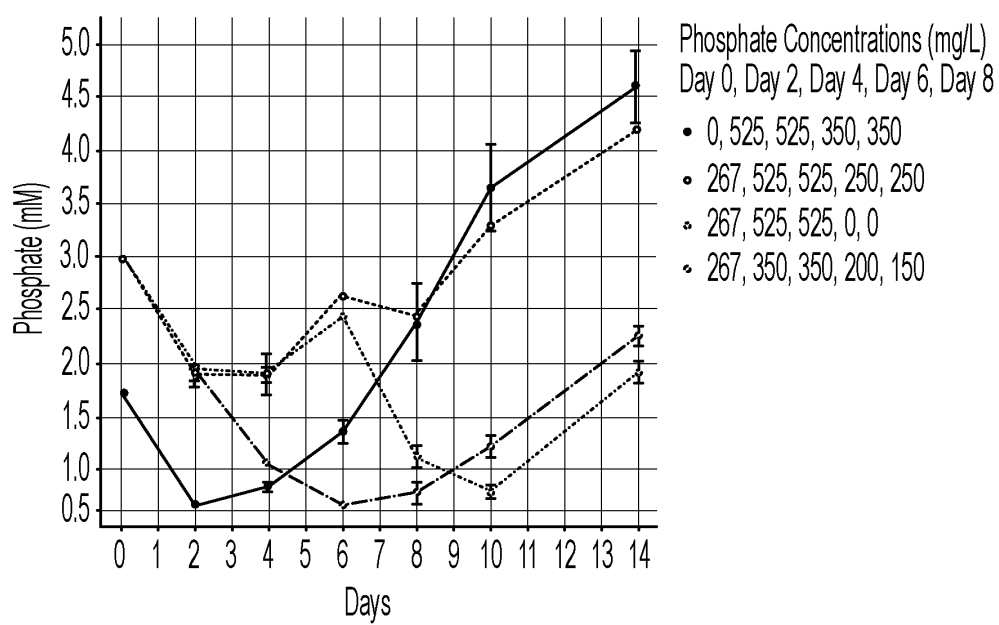


FIG. 12B

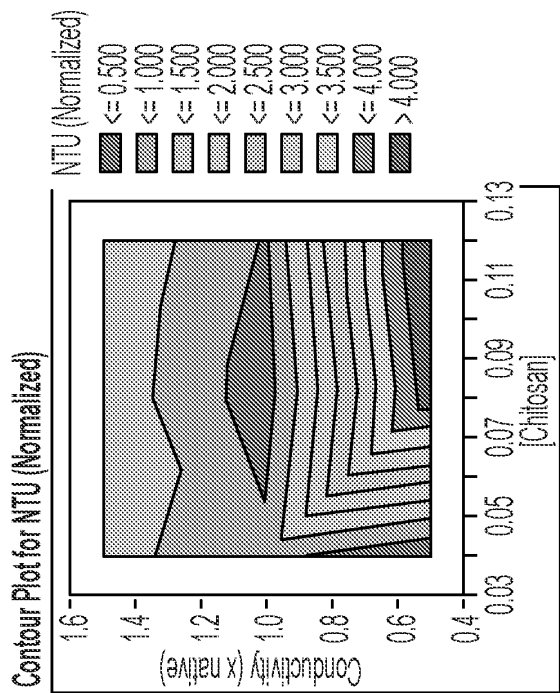


FIG. 12A

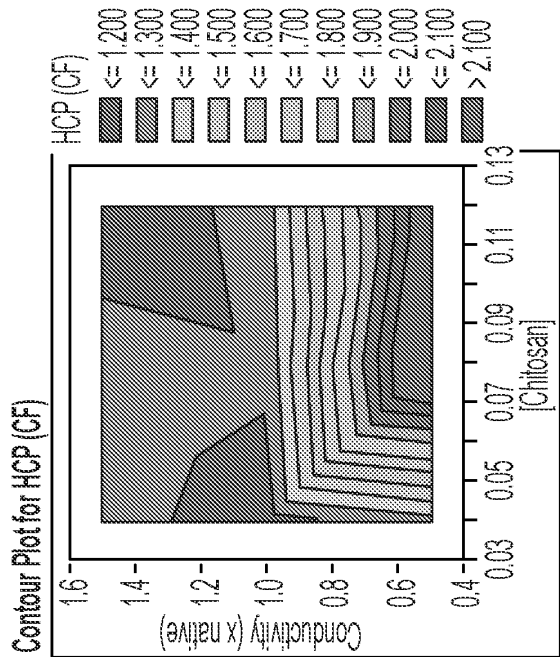


FIG. 13B

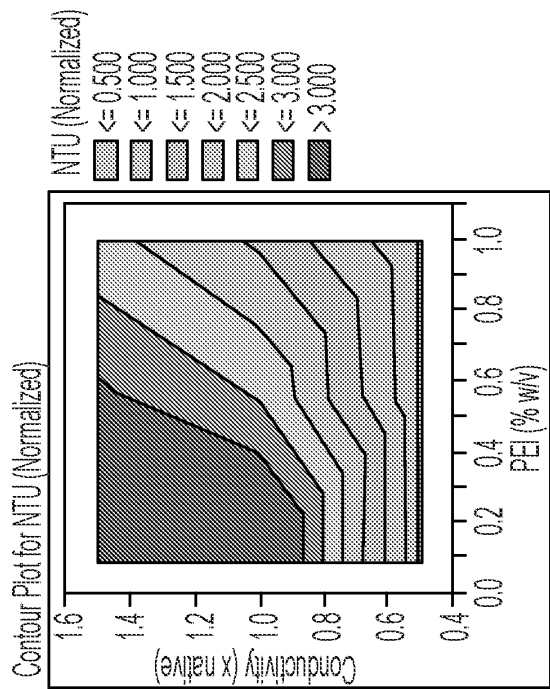
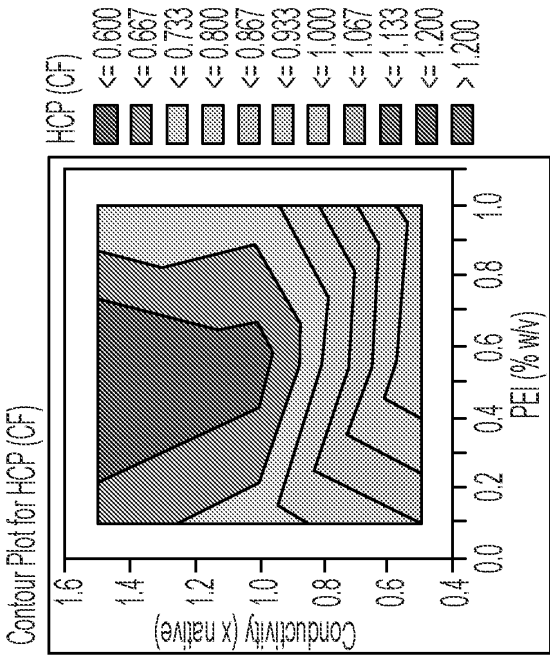


FIG. 13A



14/65

FIG. 14

	Acceptable Range VCD	Sample 1 Initial VCD	Sample 1 Avg. VCD
20L Initial VCD	≥ 2.10	3.92	3.54
20L Pre-QS VCD	≥ 14.30	21.00	19.2
20L Final VCD	≥ 10.00	14.24	13.7
50L Initial VCD	≥ 1.70	3.58	3.15
50L Final VCD	≥ 22.30	37.94	31.6
500L Initial VCD	≥ 1.70	3.92	3.25
500L Final VCD	≥ 11.00	22.07	17.9
3,000L Initial VCD	≥ 2.30	5.43	4.45
3,000L Final VCD	43.5-54.5 (47.0-54.5)	48.9	48.1

FIG. 15

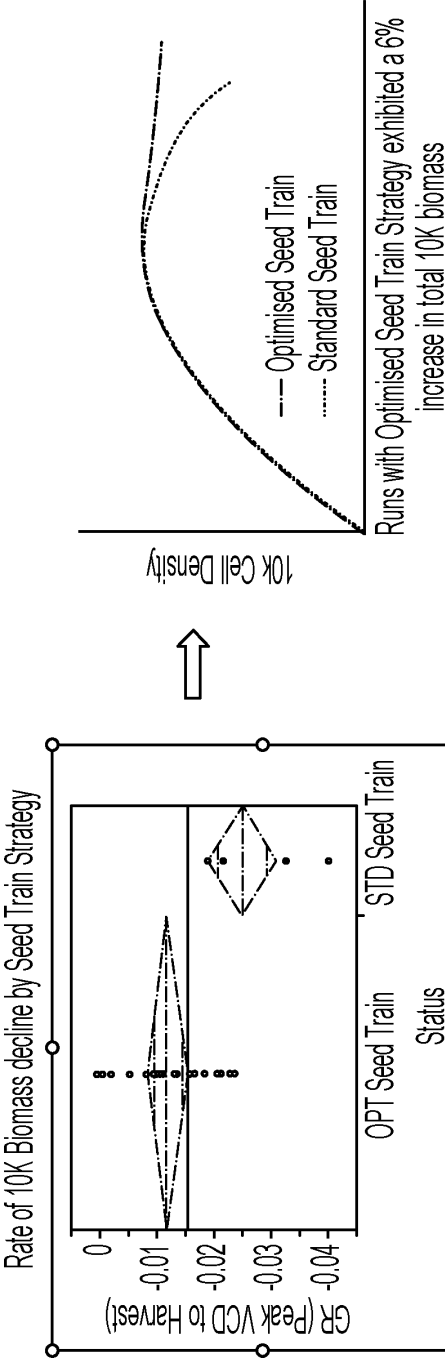


FIG. 16A

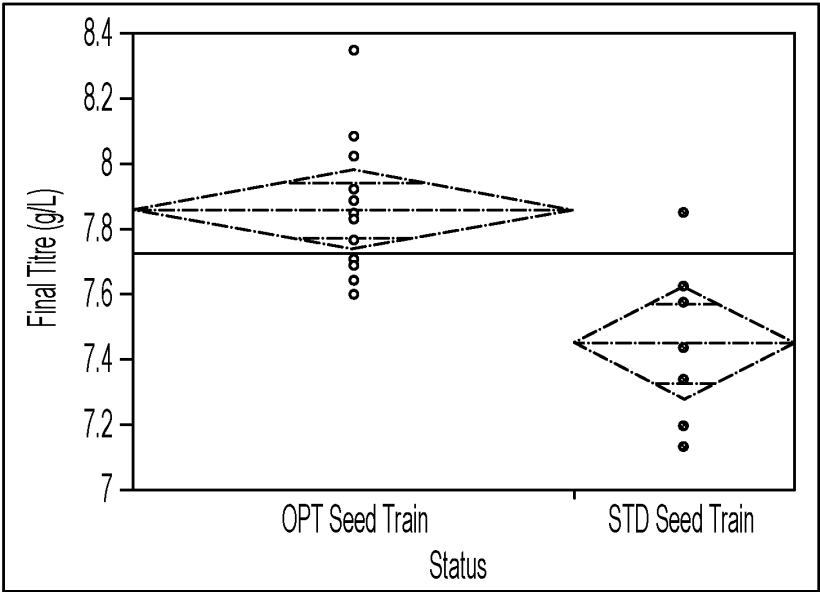
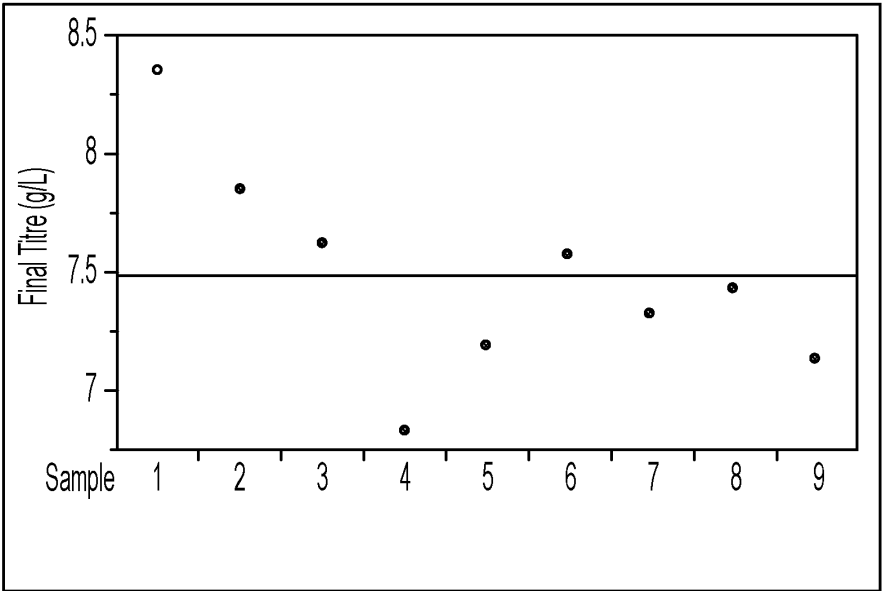
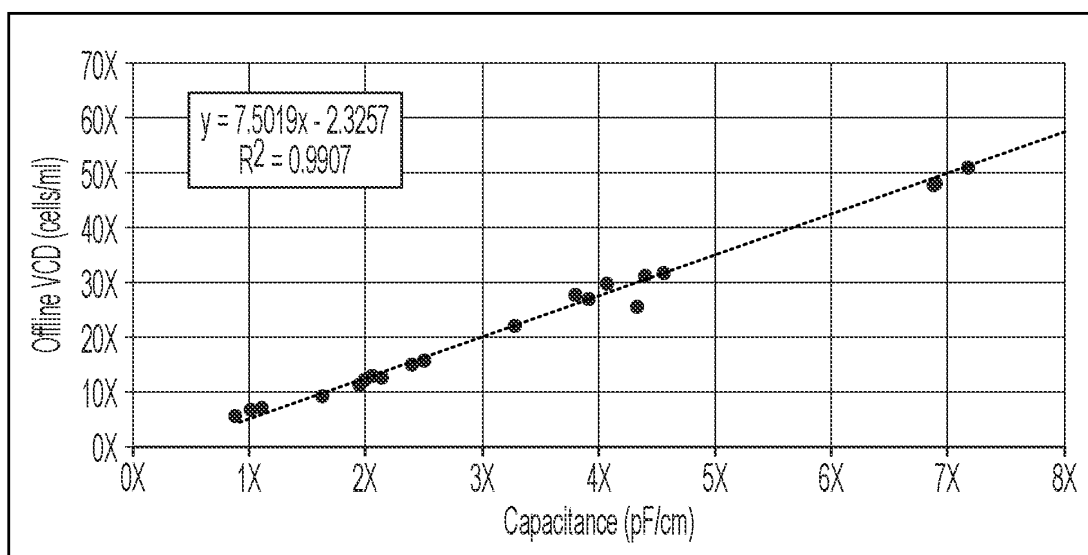


FIG. 16B



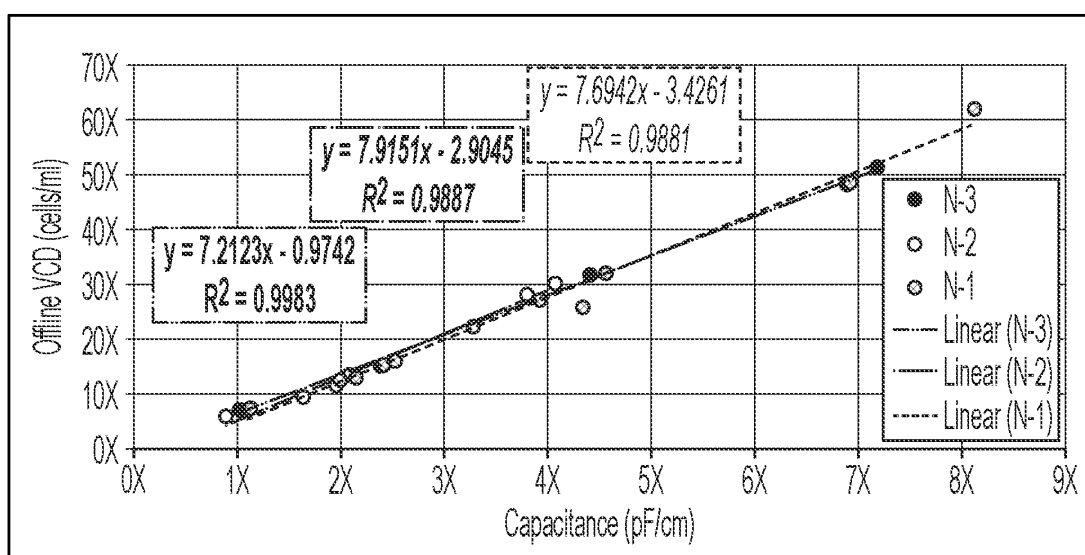
17/65

FIG. 17



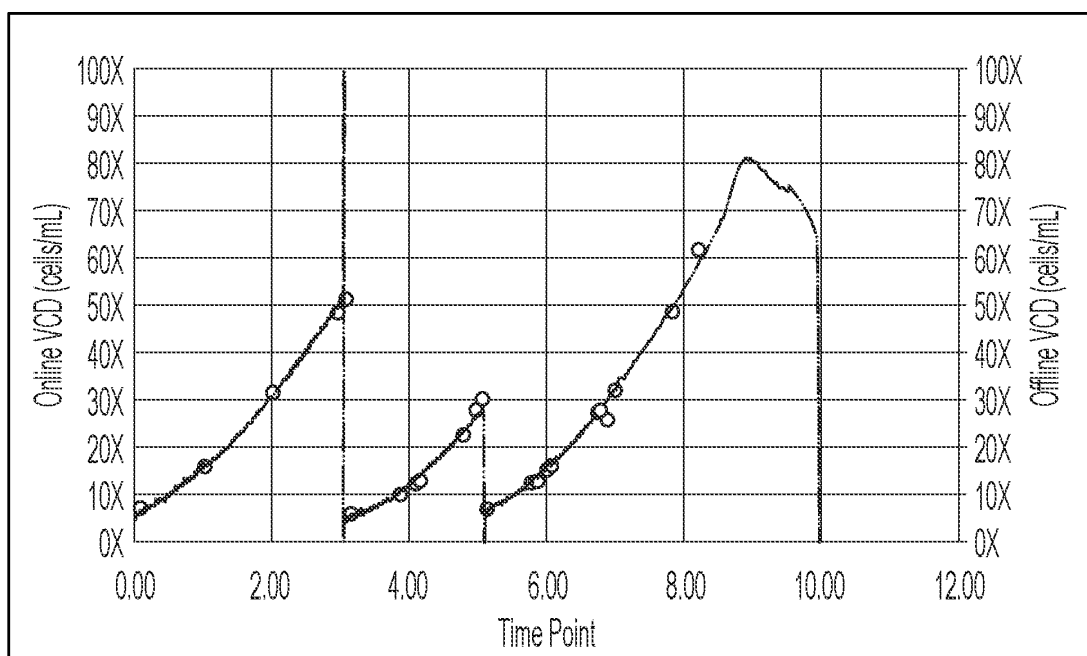
18/65

FIG. 18



19/65

FIG. 19



20/65

FIG. 20

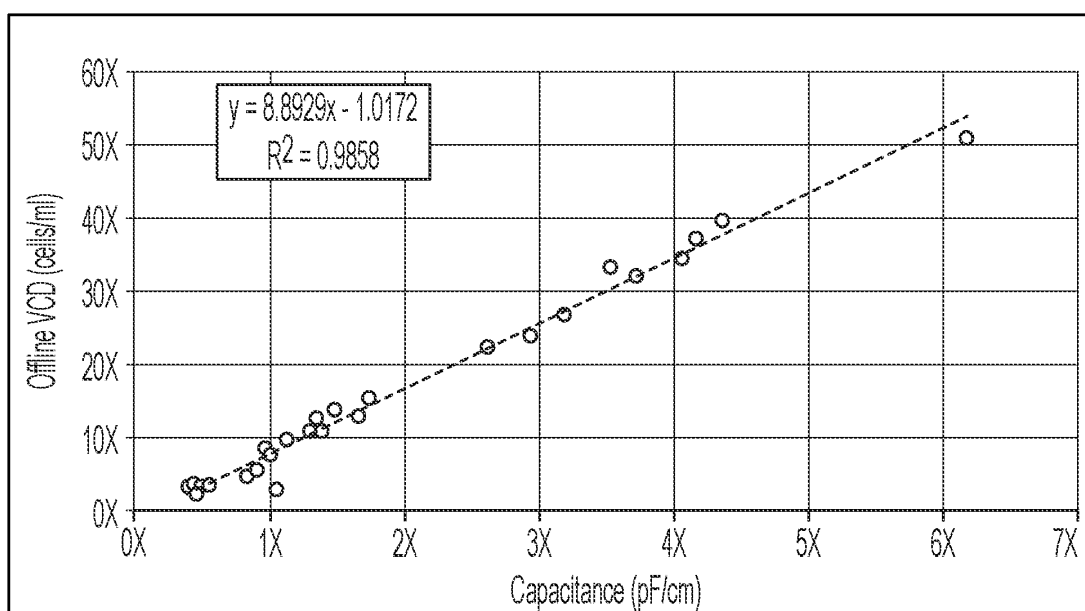
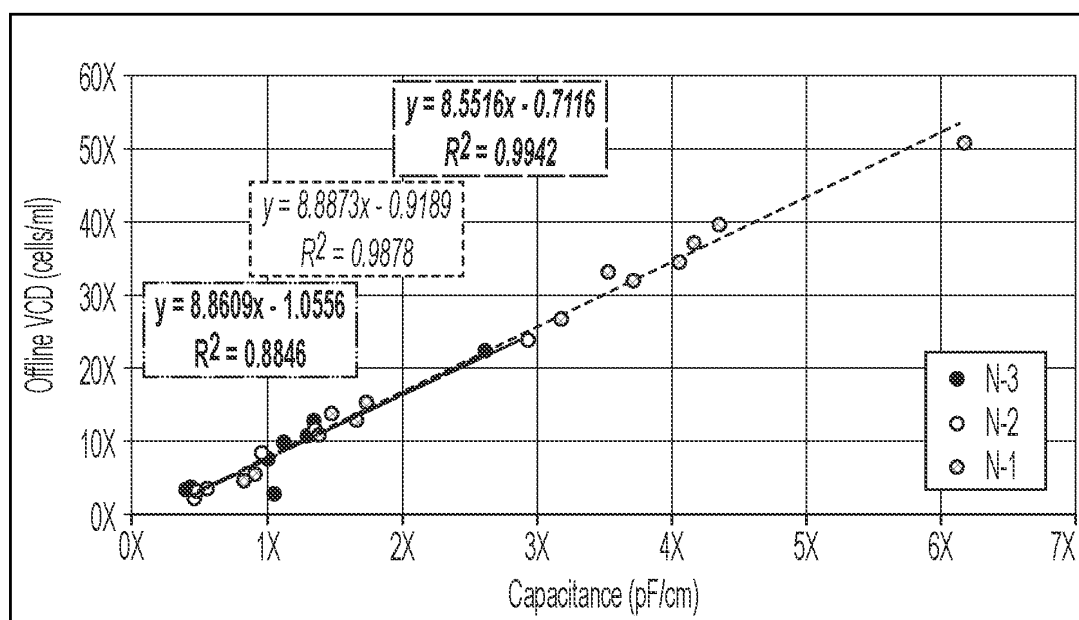
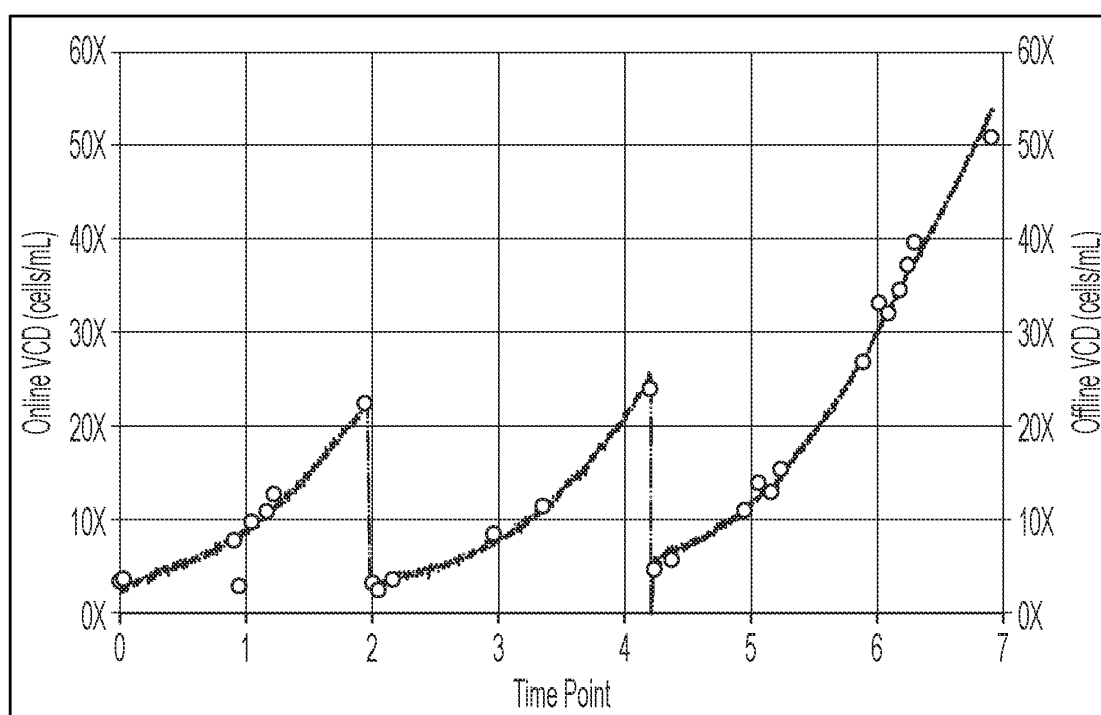


FIG. 21



22/65

FIG. 22



23/65

FIG. 23

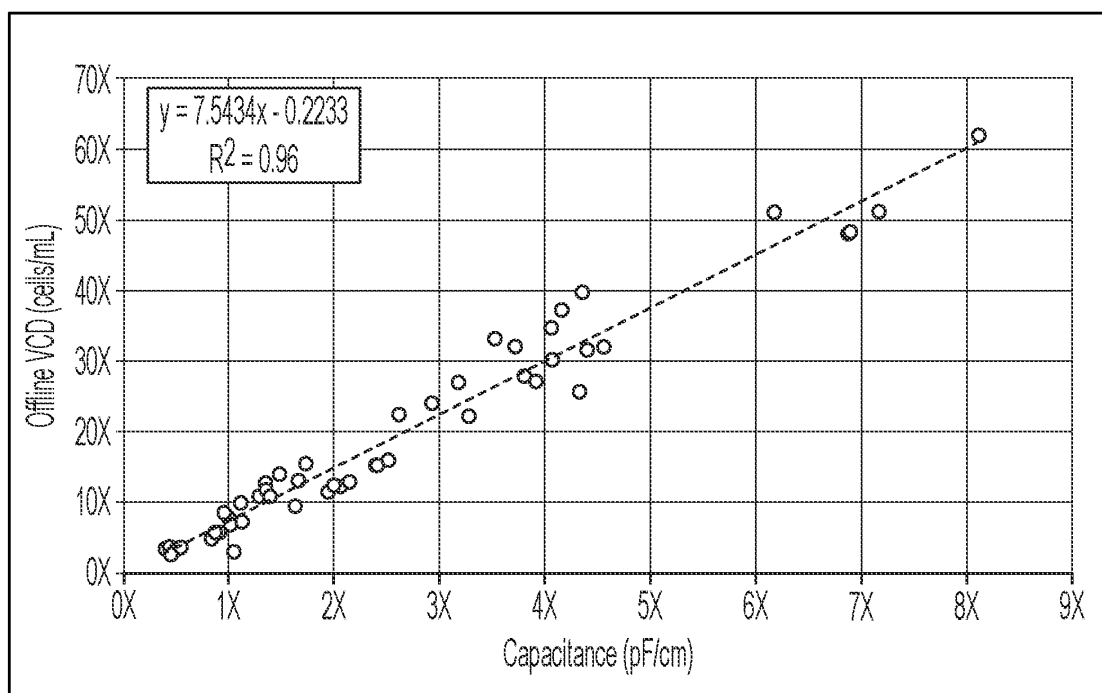


FIG. 24A

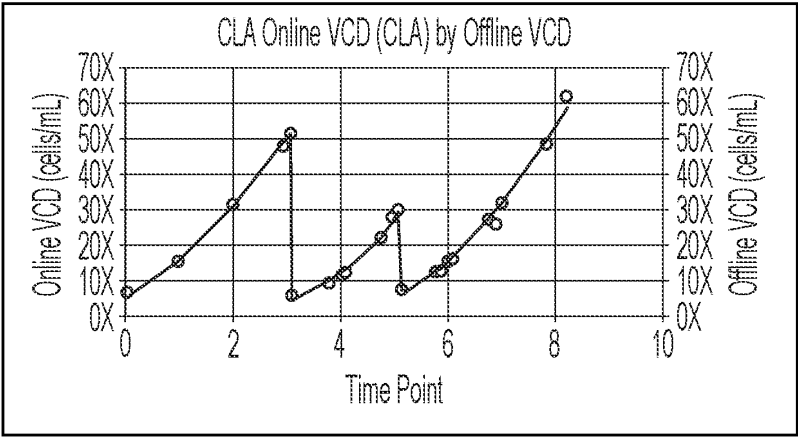


FIG. 24B

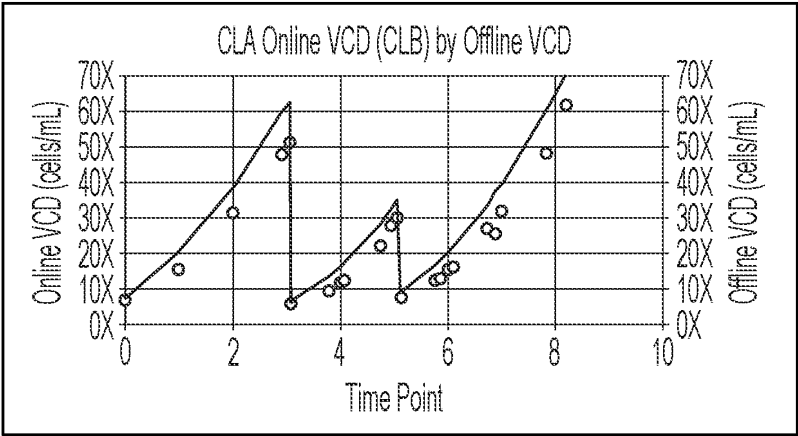


FIG. 24C

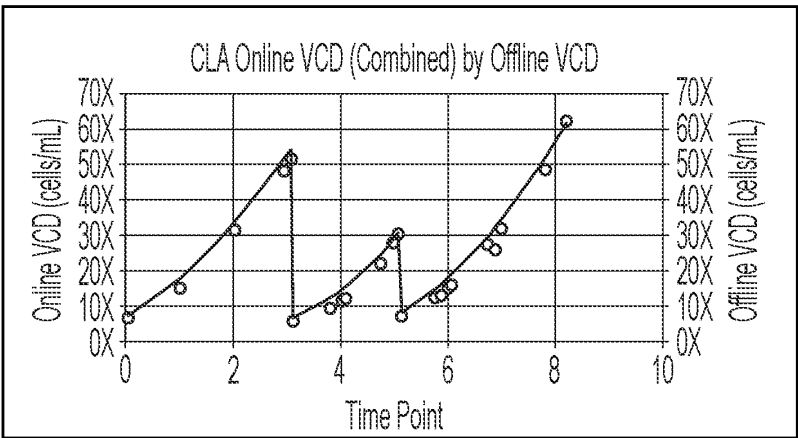


FIG. 25A

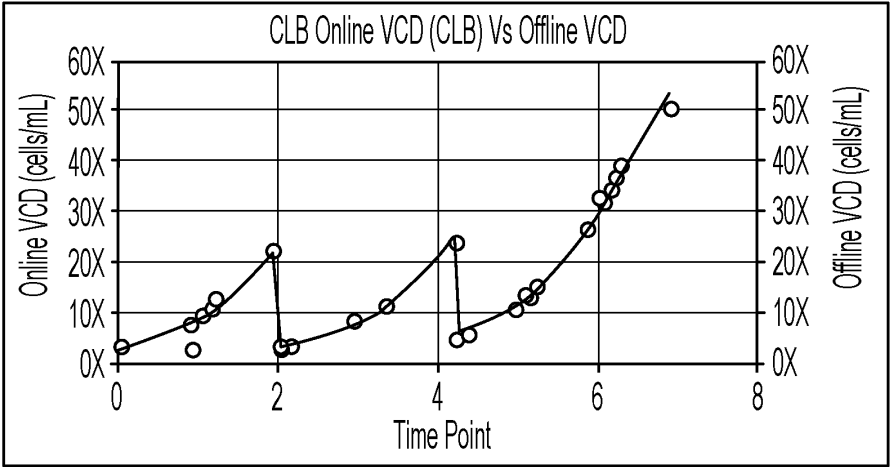


FIG. 25B

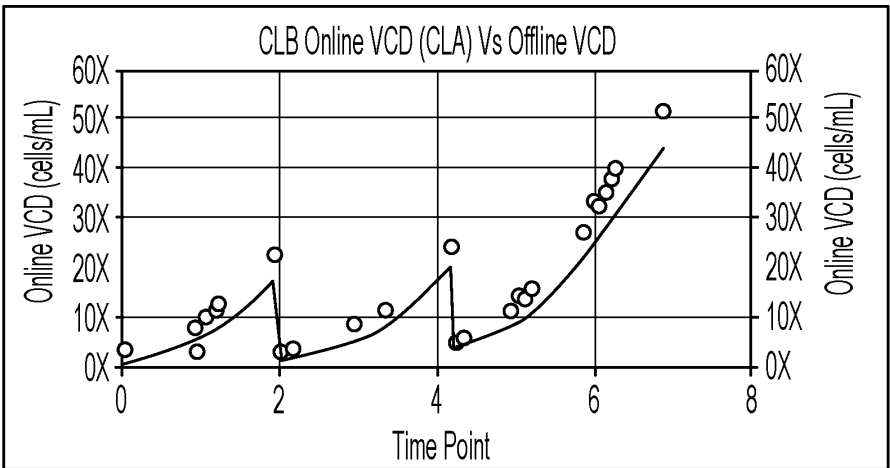


FIG. 25C

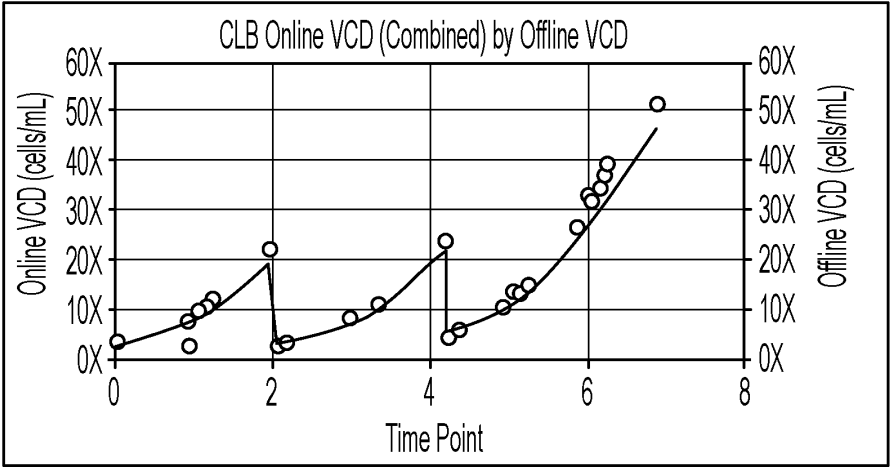


FIG. 26A

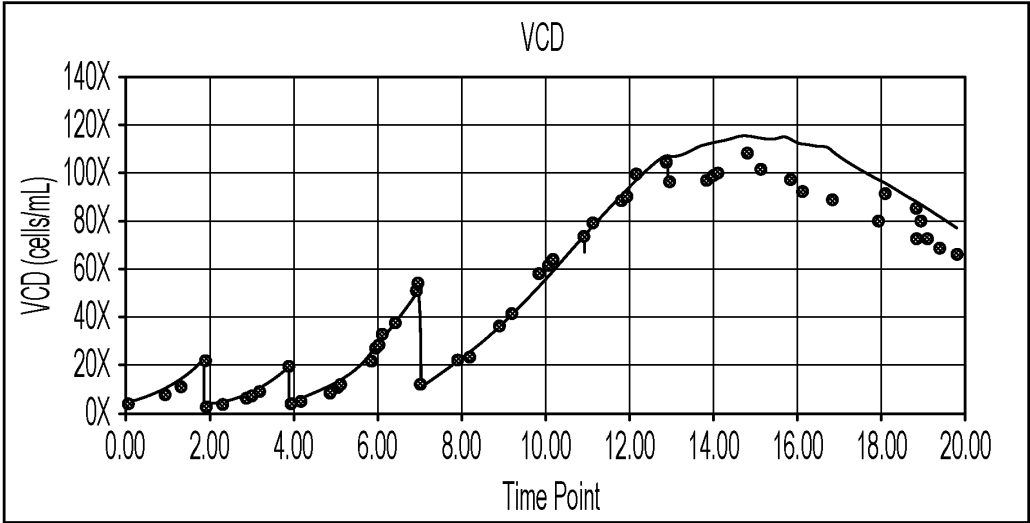


FIG. 26B

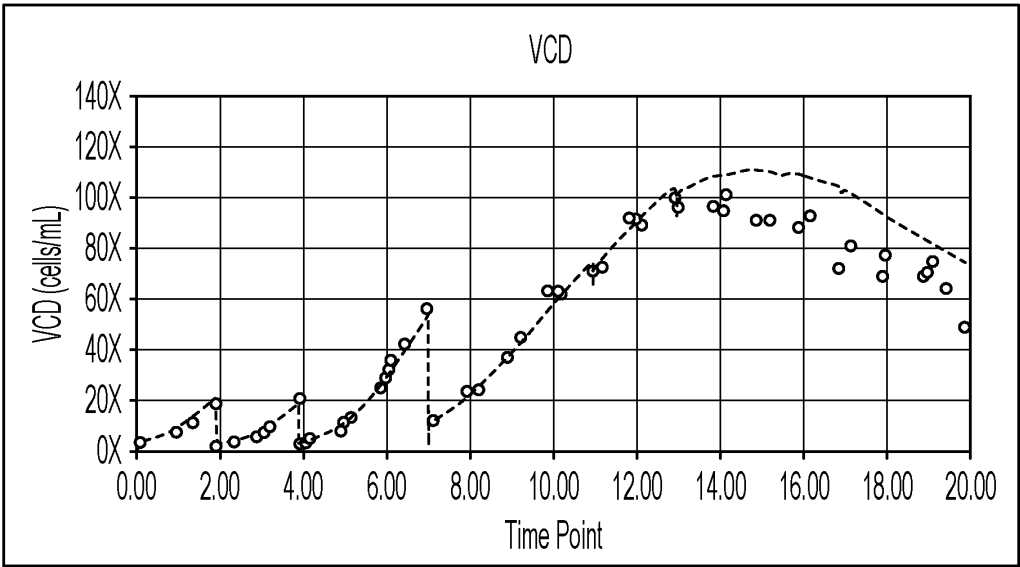


FIG. 27B

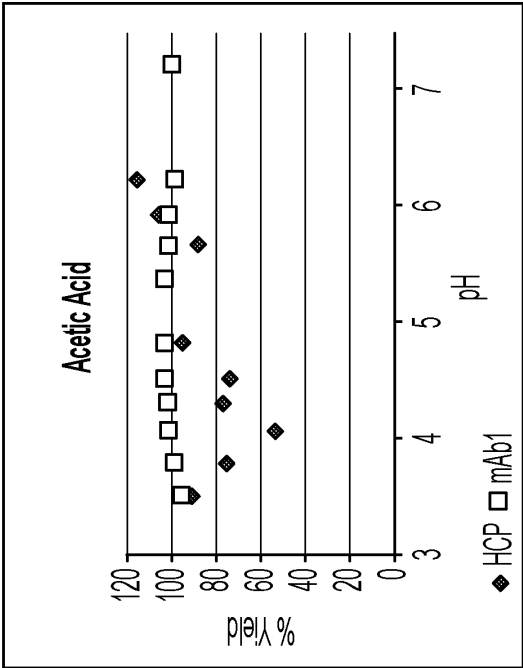
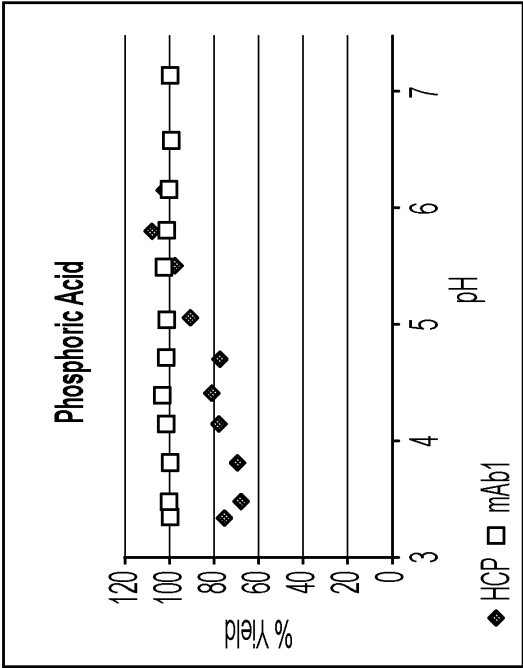
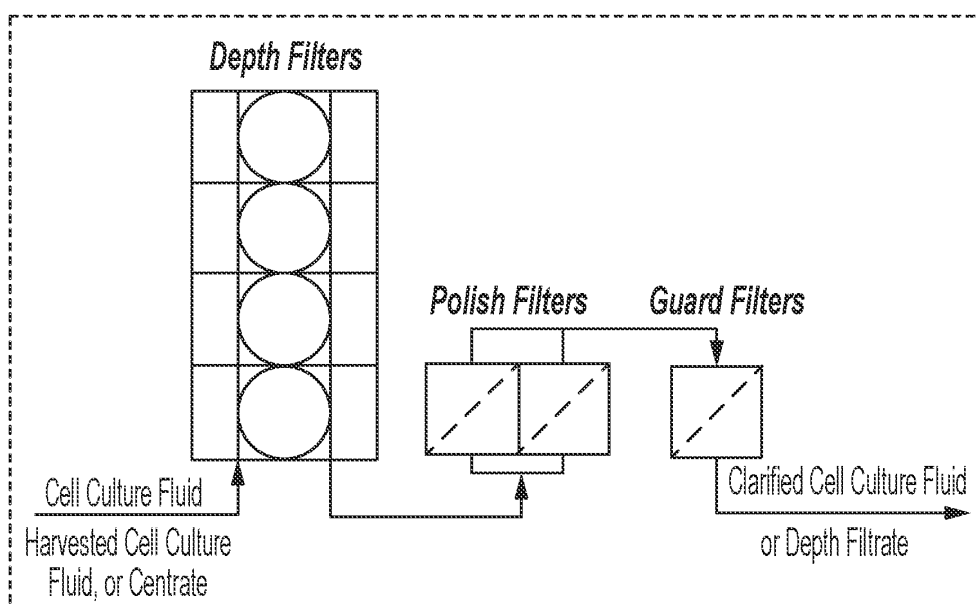


FIG. 27A



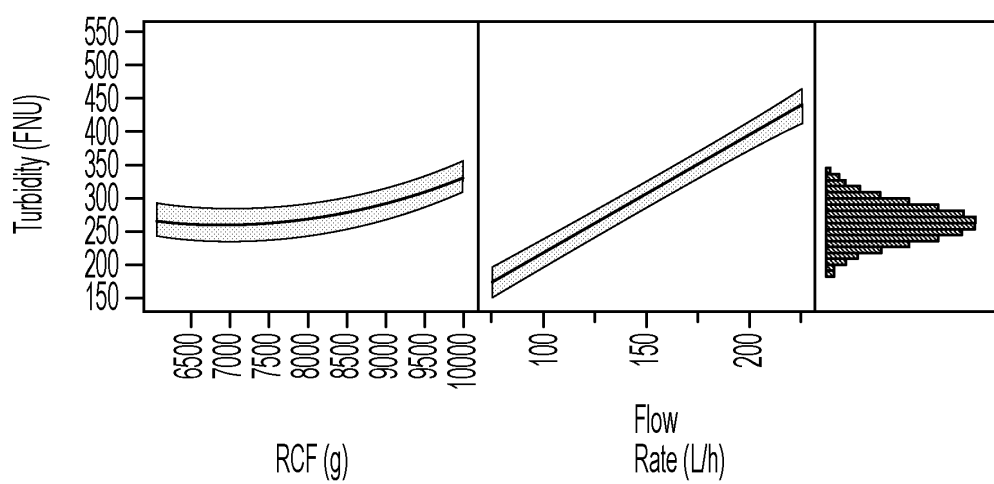
28/65

FIG. 28

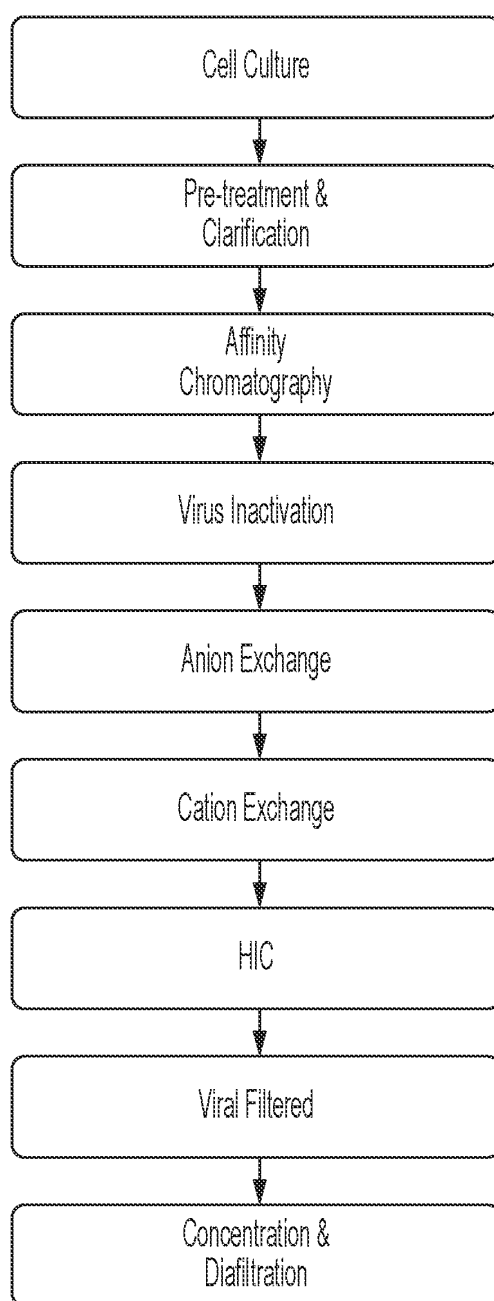


29/65

FIG. 29



30/65

FIG. 30

31/65

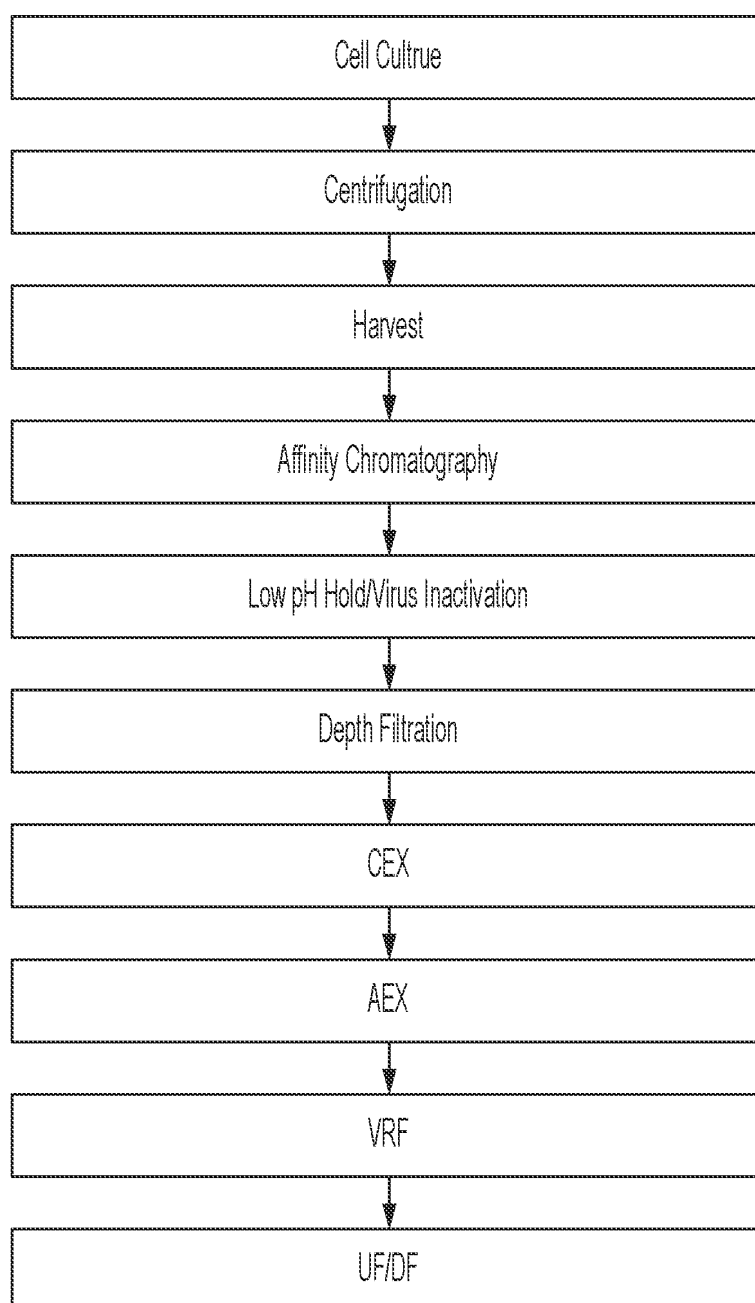
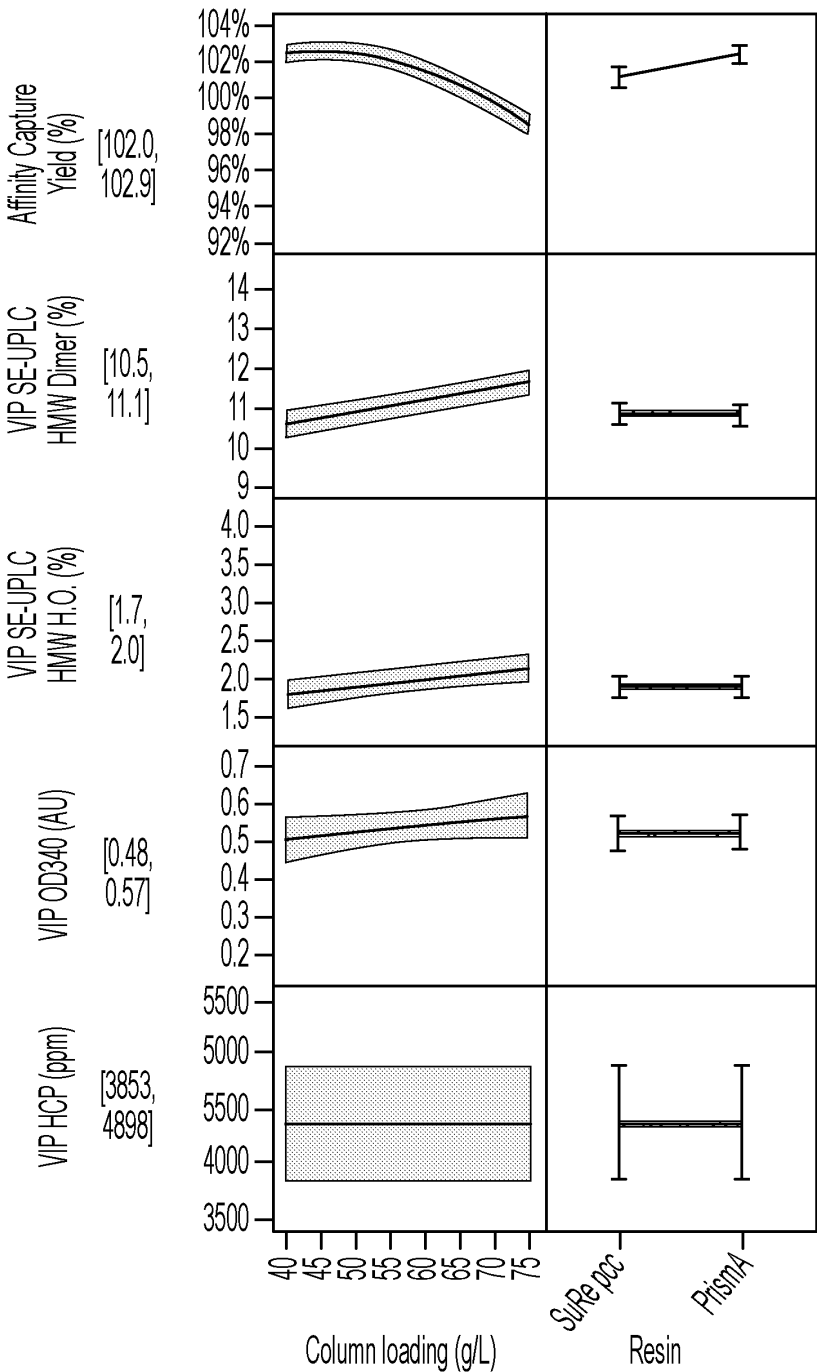
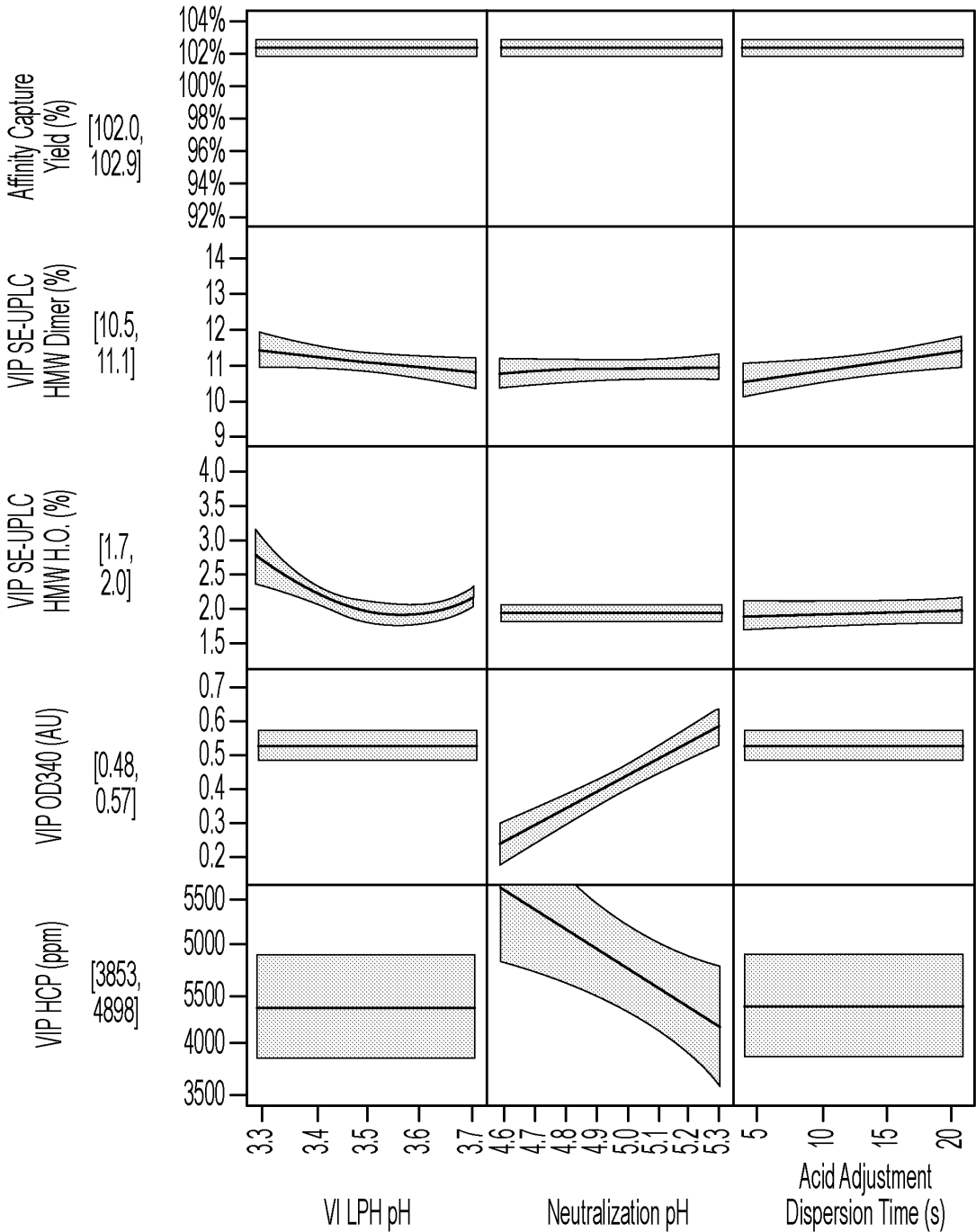
FIG. 31

FIG. 32



AU, absorbance unit; HCP, host cell protein; HMW, high molecular weight; H.O., higher order; LPH, low pH hold; OD340, optical density at 340 nm; ppm, parts per million; s, second; SE-UPLC, size exclusion ultra performance liquid chromatography; VI, viral inactivation; VIP, viral inactivated pool

FIG. 32 continued



AU, absorbance unit; HCP, host cell protein; HMW, high molecular weight; H.O., higher order; LPH, low pH hold; OD340, optical density at 340 nm; ppm, parts per million; s, second; SE-UPLC, size exclusion ultra performance liquid chromatography; VI, viral inactivation; VIP, viral inactivated pool

FIG. 33

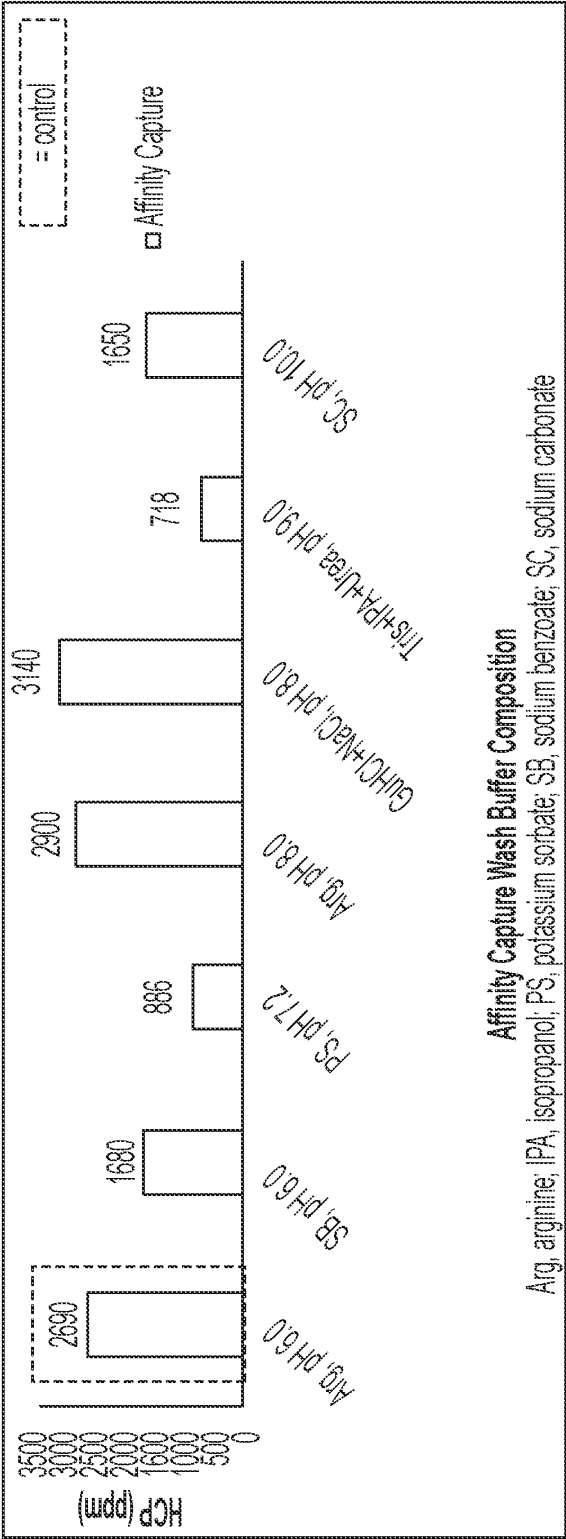
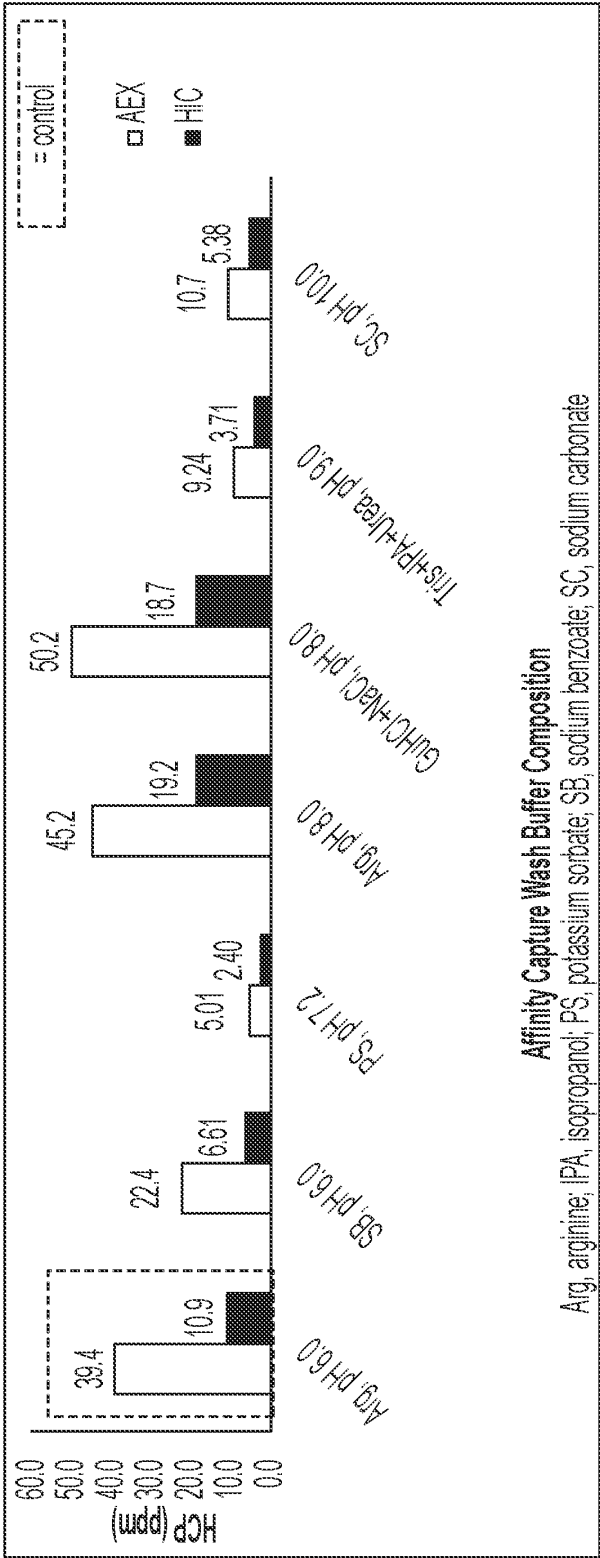
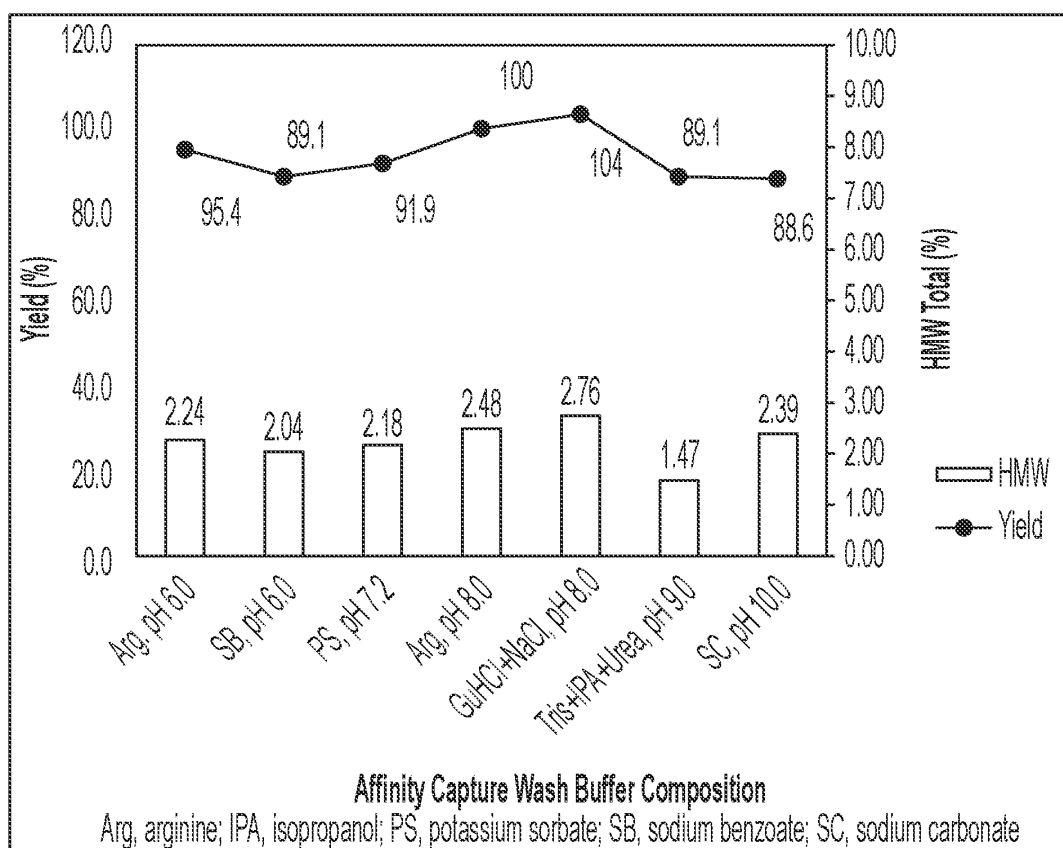


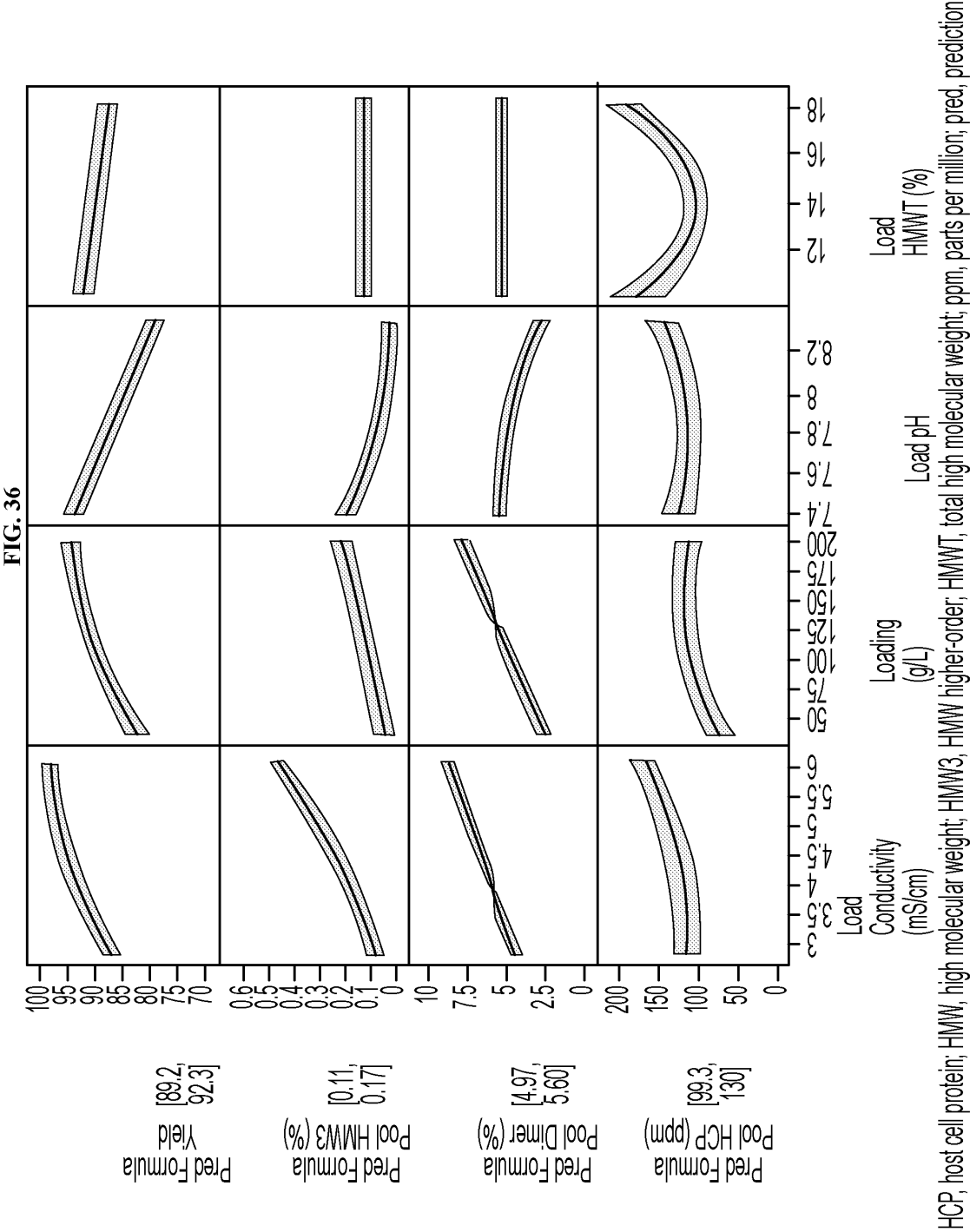
FIG. 34

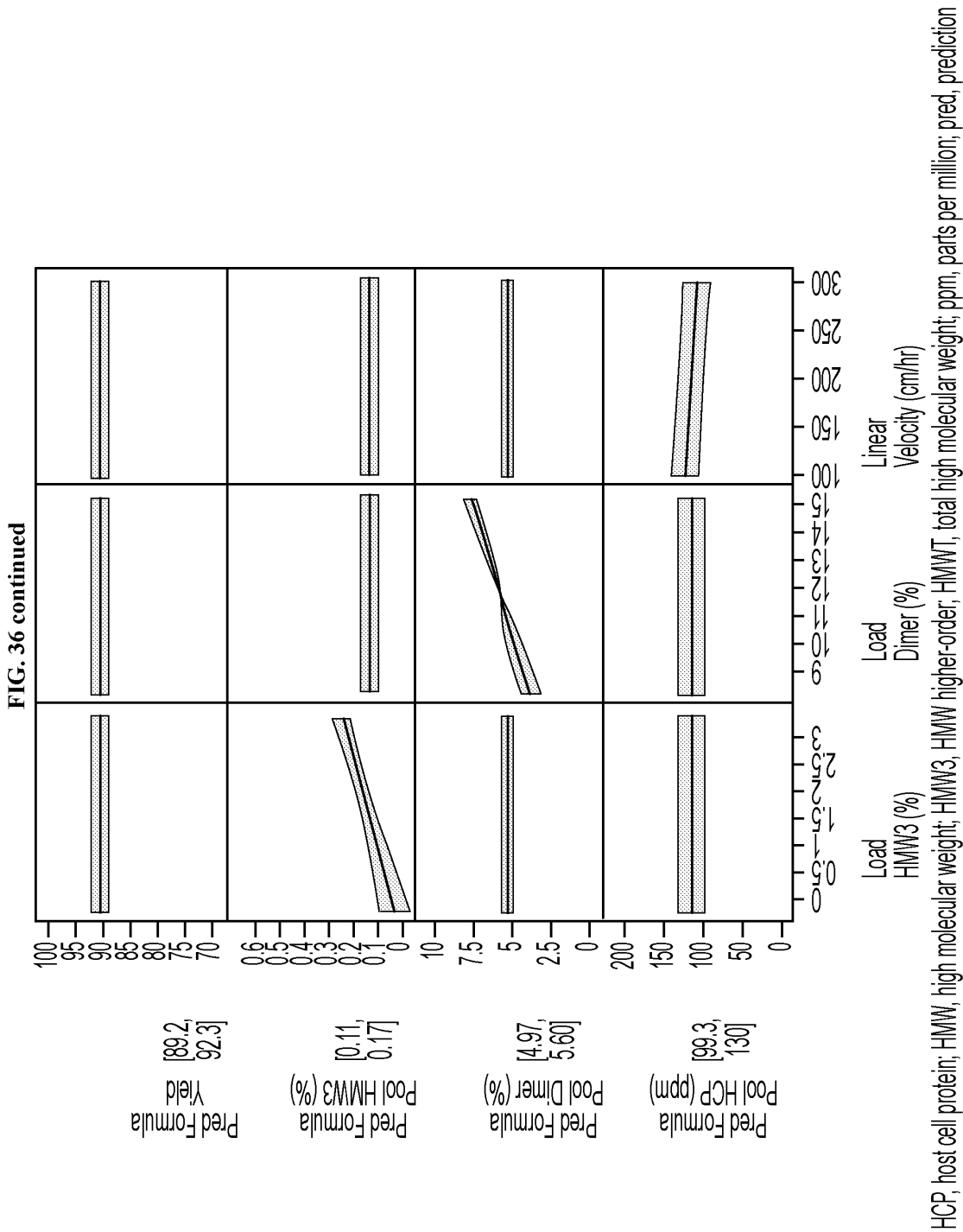


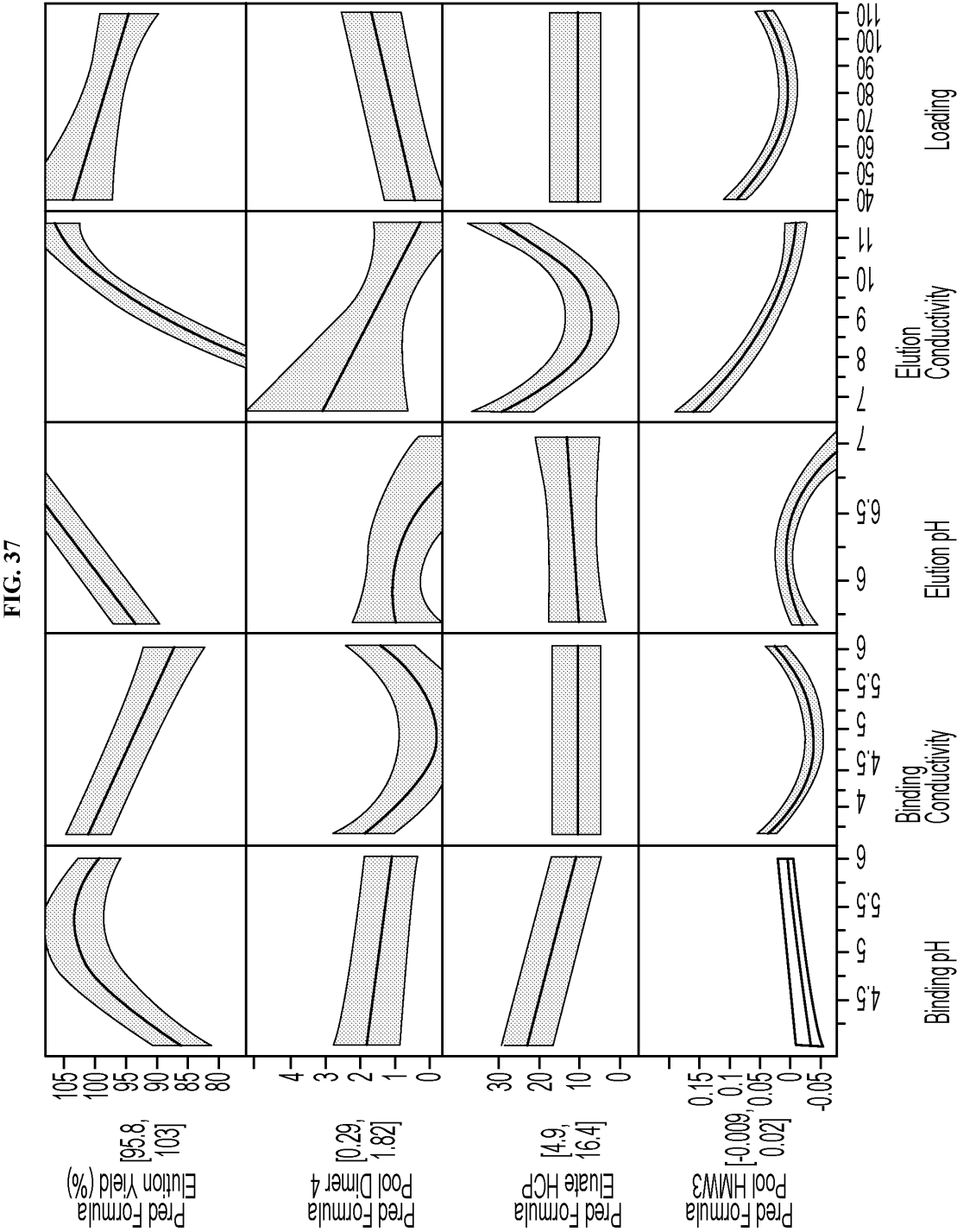
36/65

FIG. 35









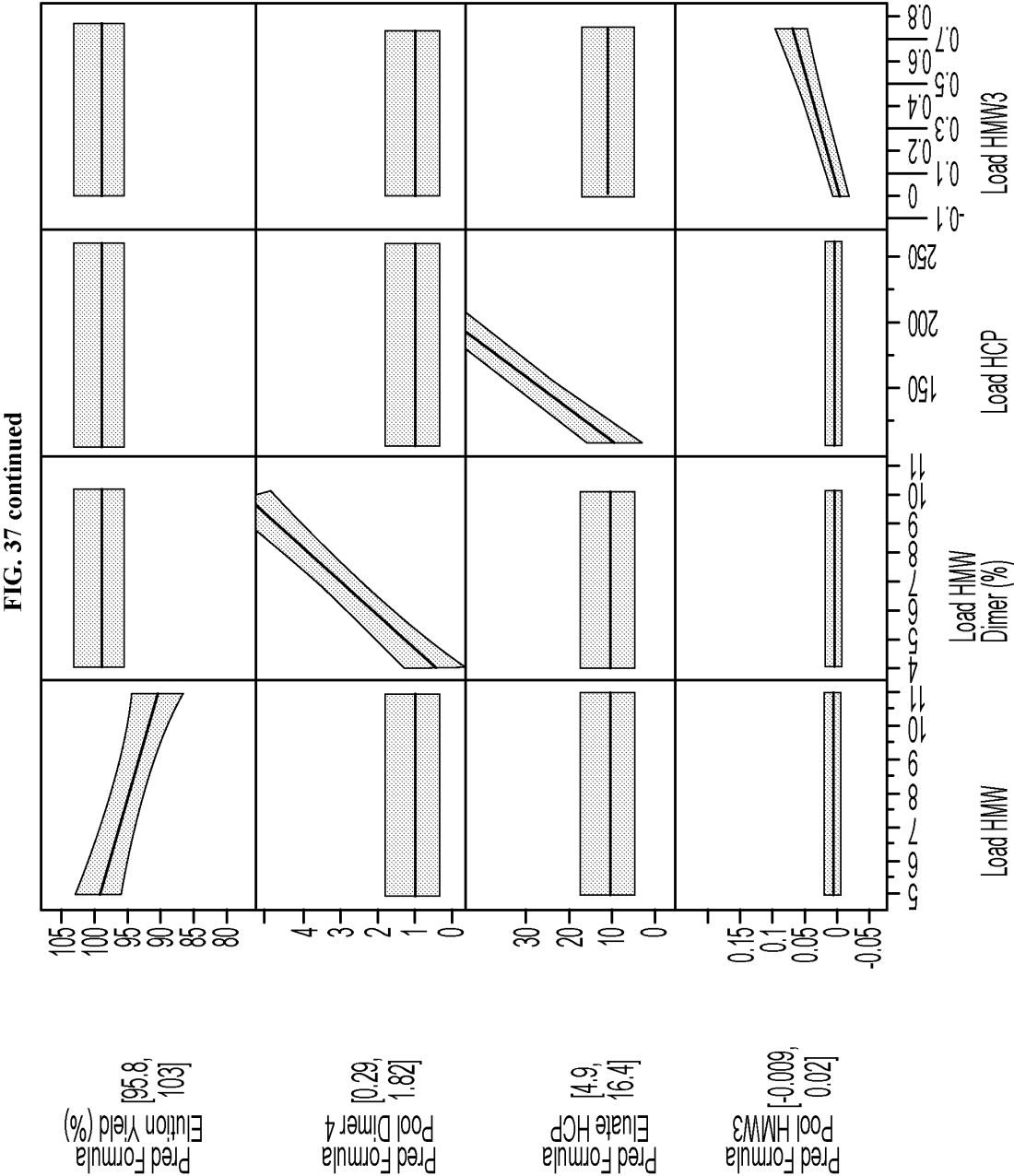
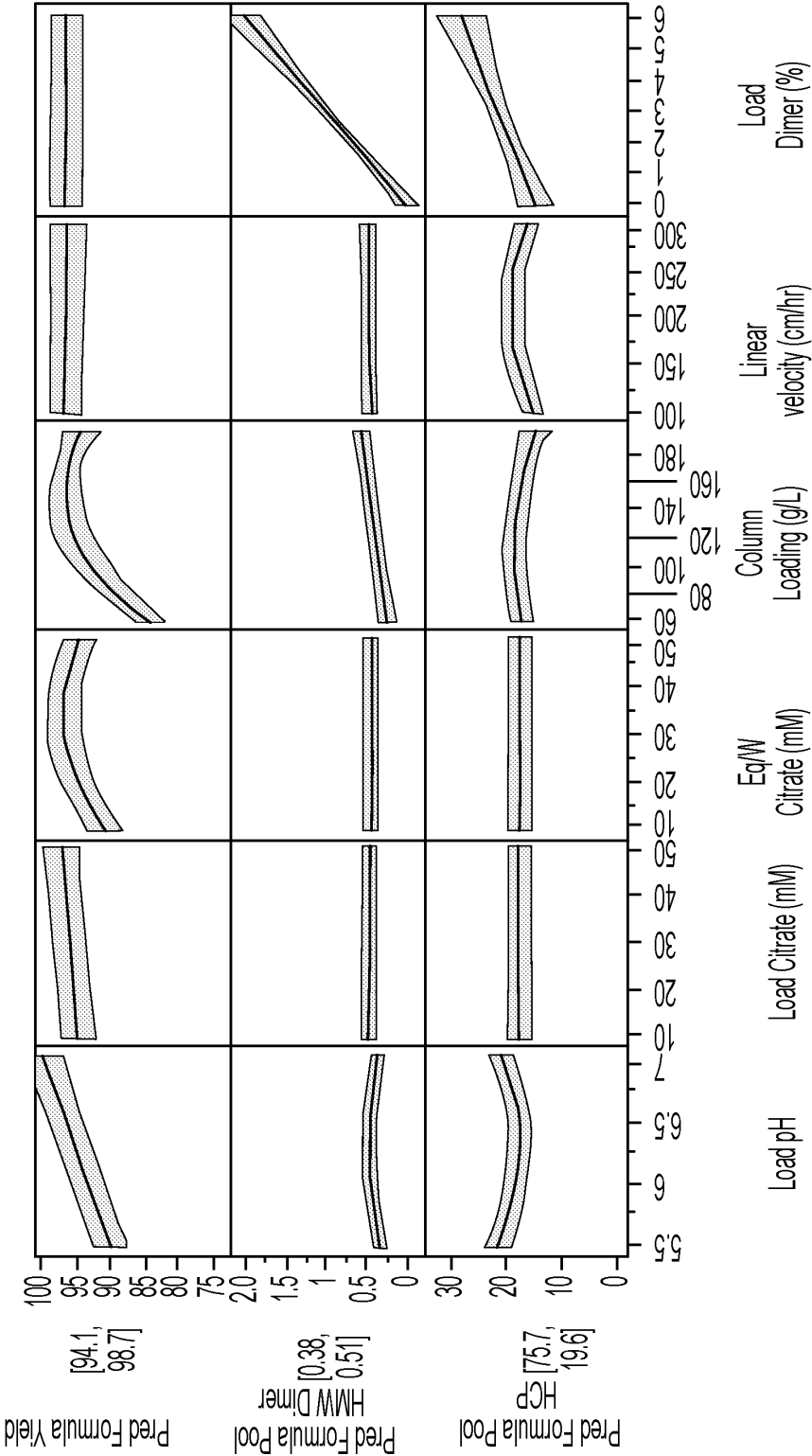


FIG. 38



Eq/W, equilibration/ wash; HCP, host cell protein; HMW, high molecular weight; ppm, parts per million

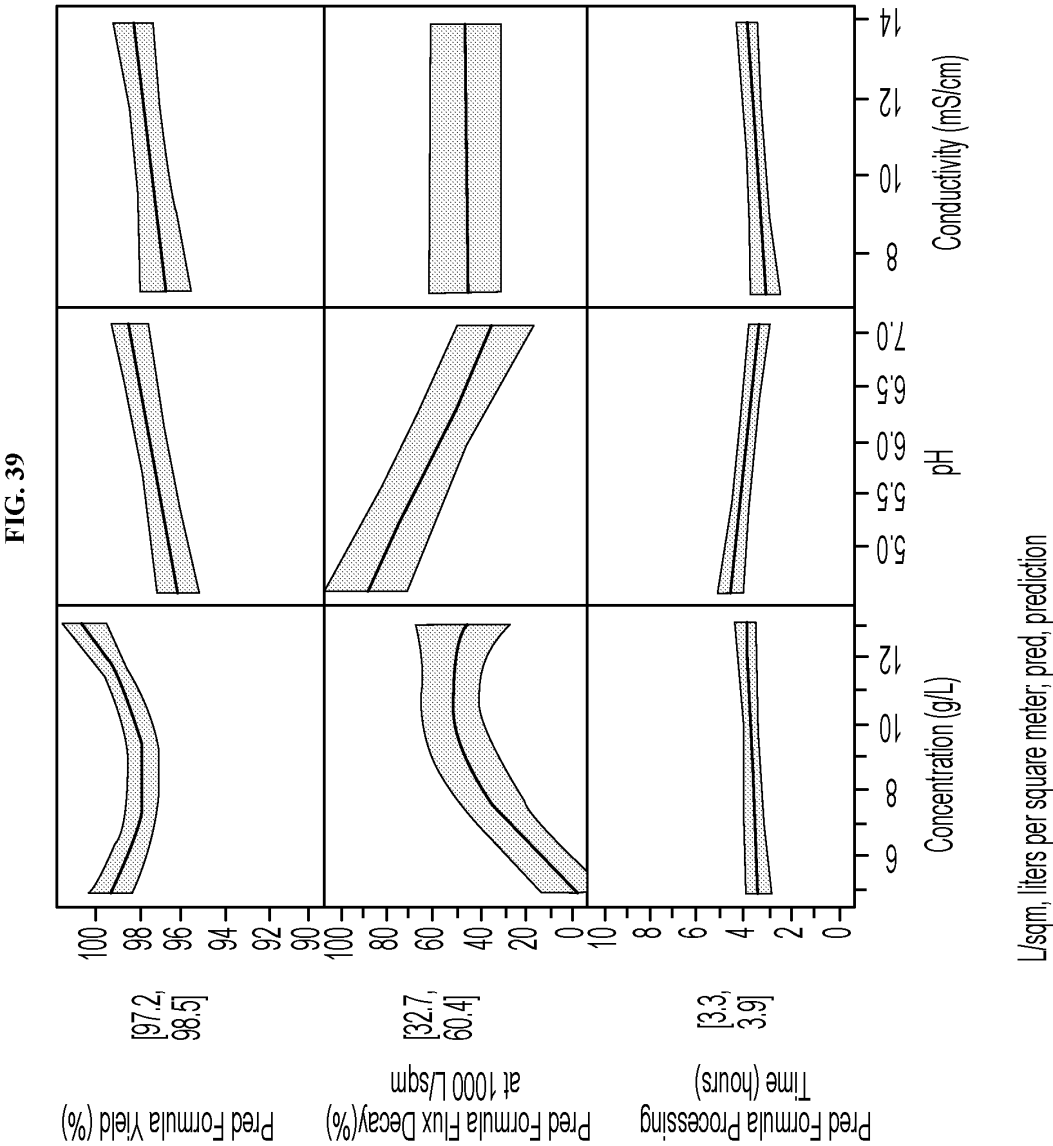


FIG. 40

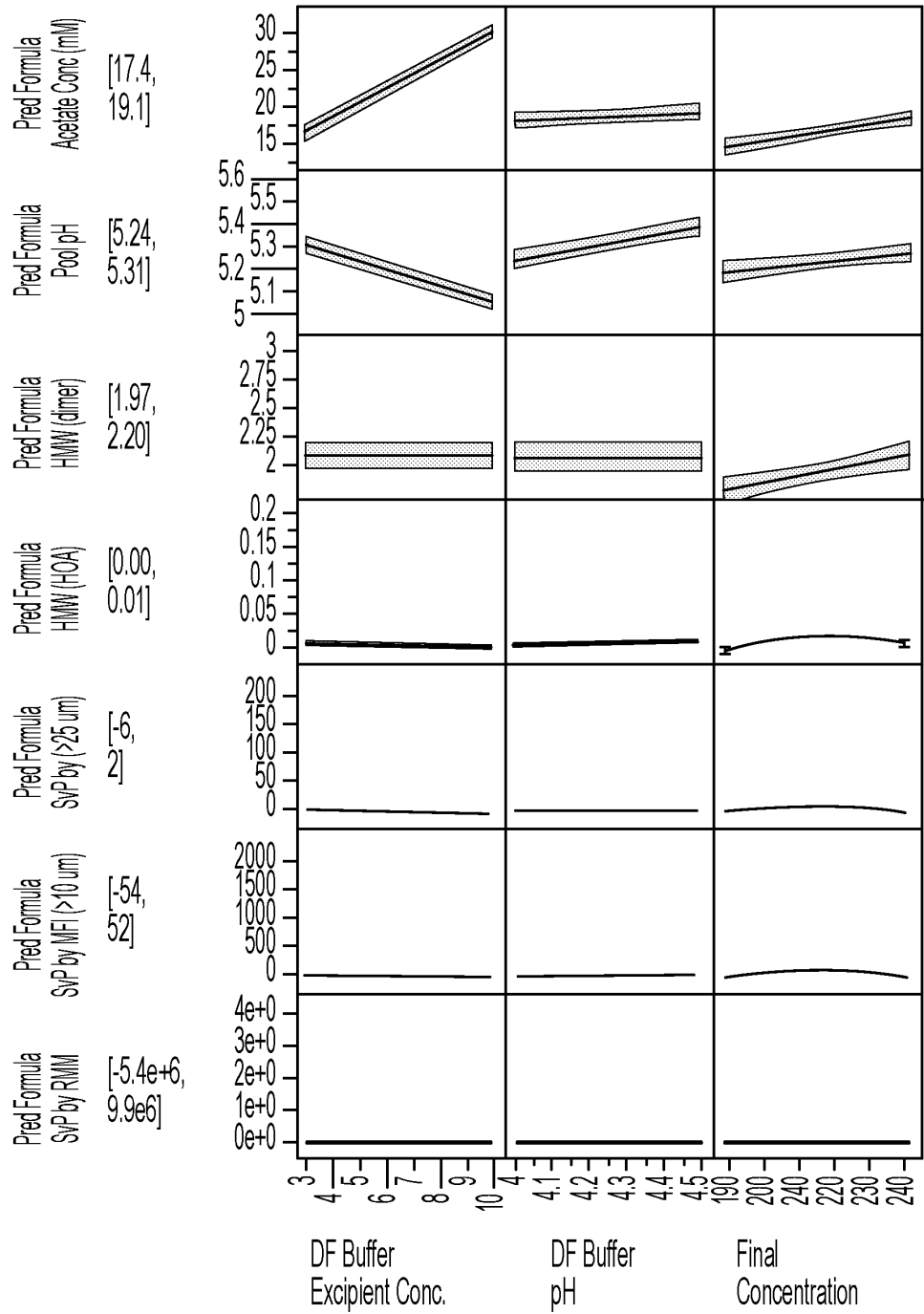
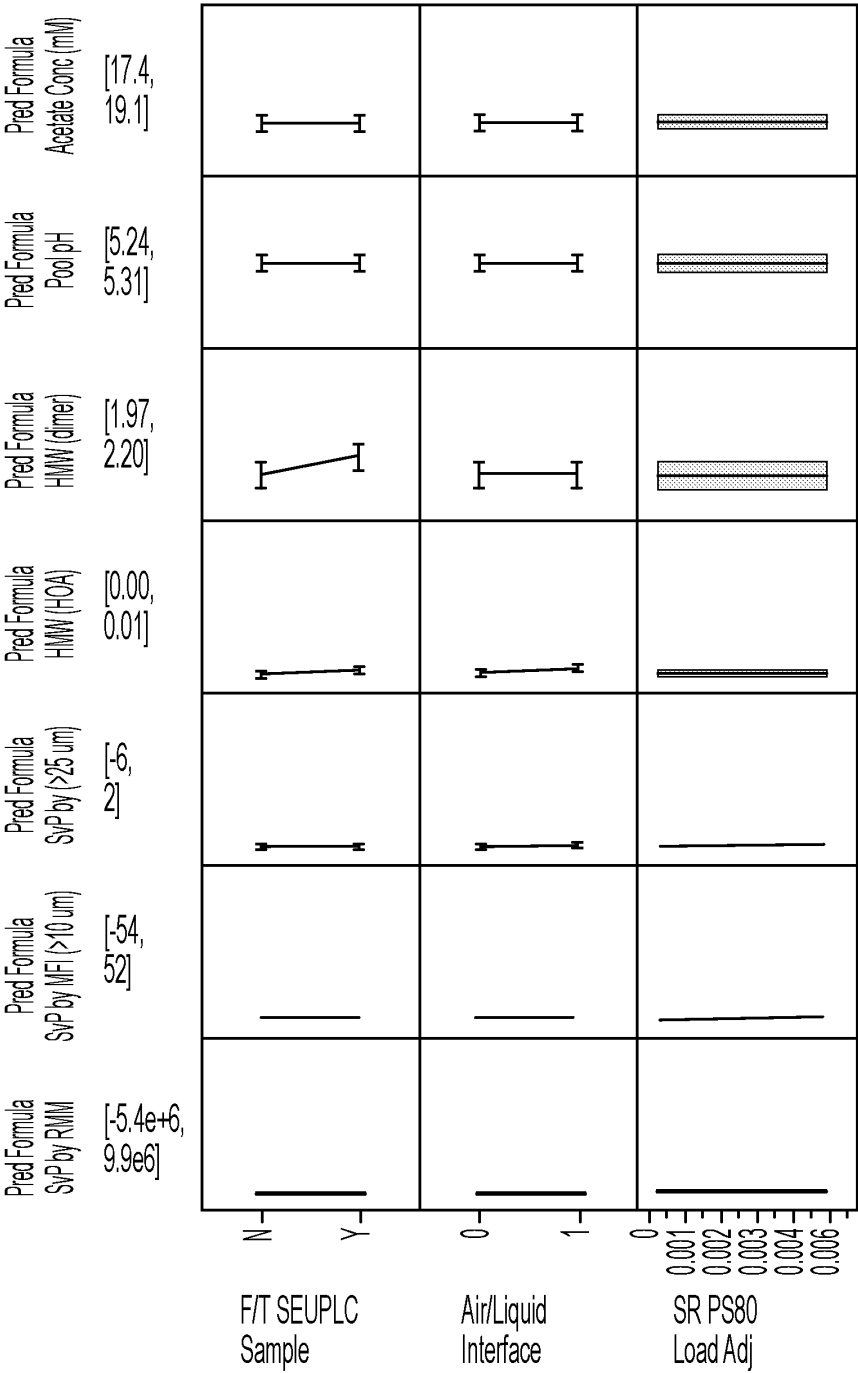


FIG. 40 continued



45/65

FIG. 41

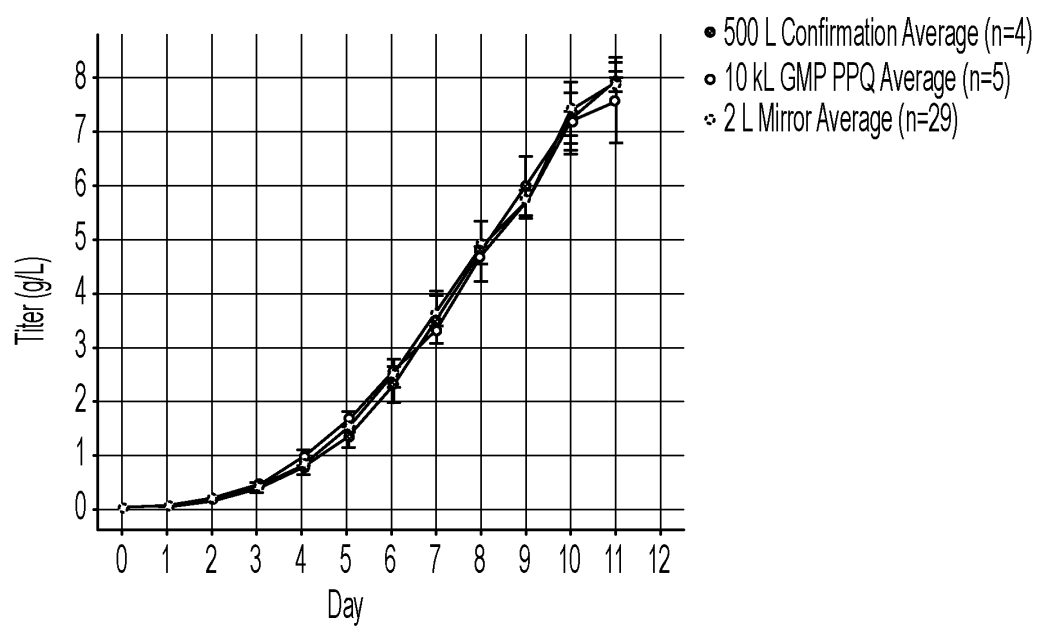


FIG. 42

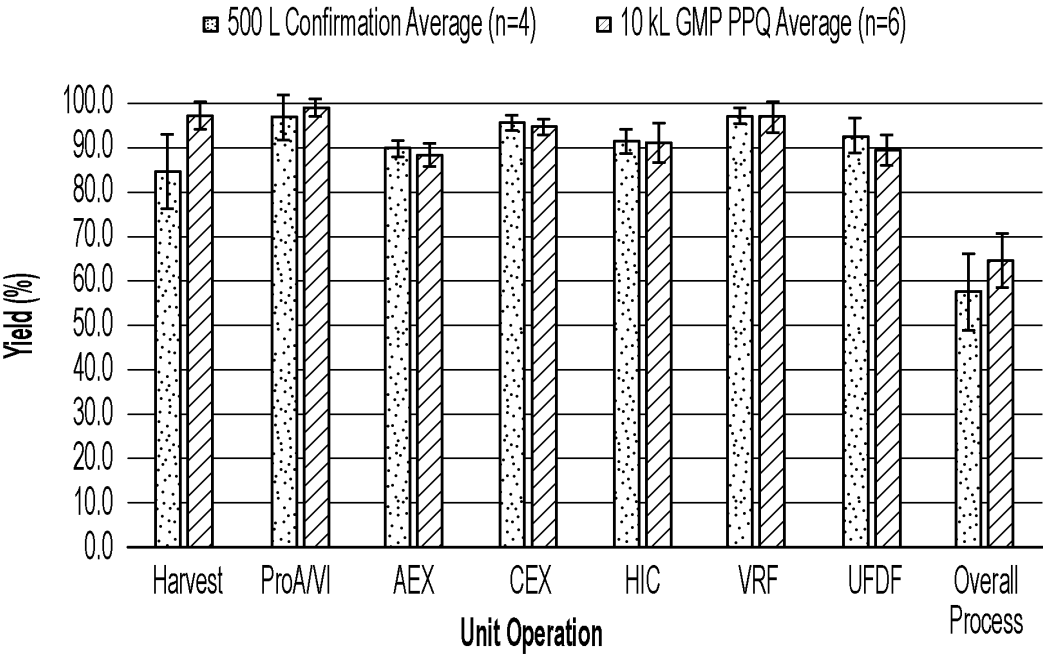


FIG. 43

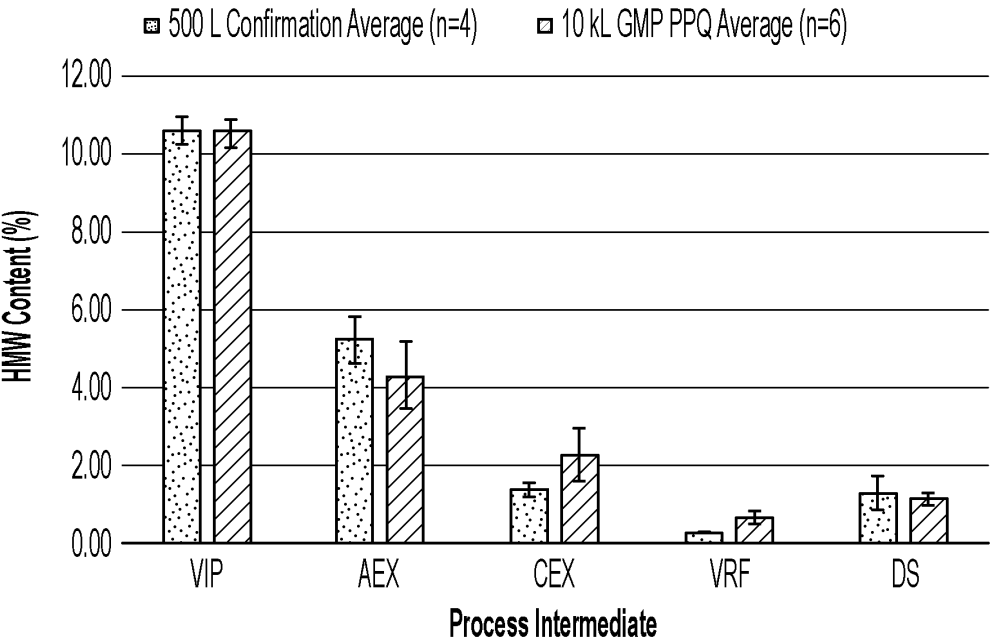


FIG. 44

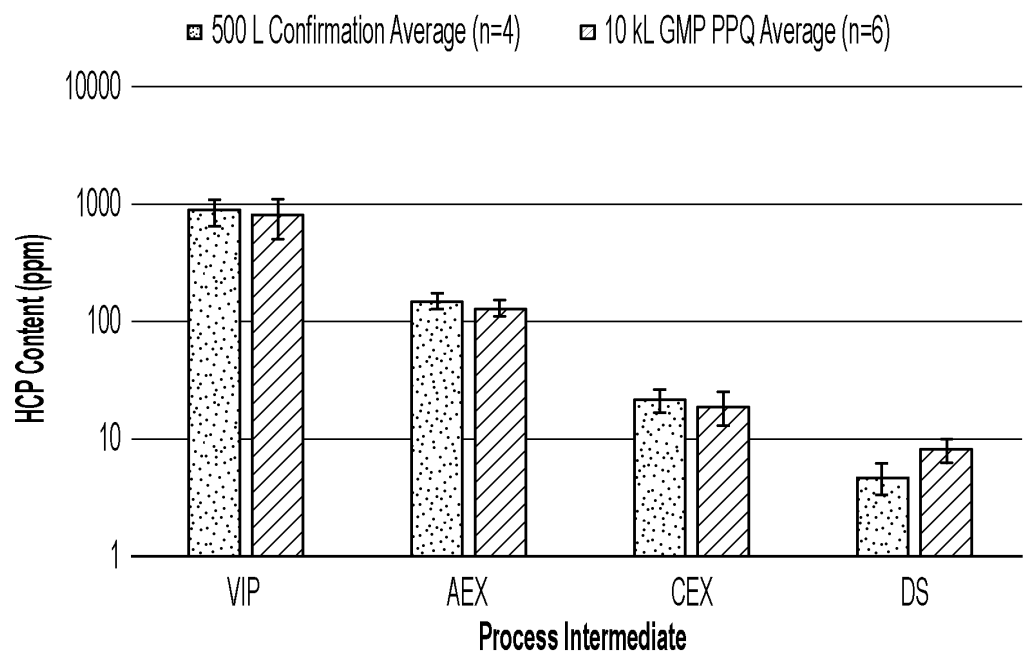


FIG. 45

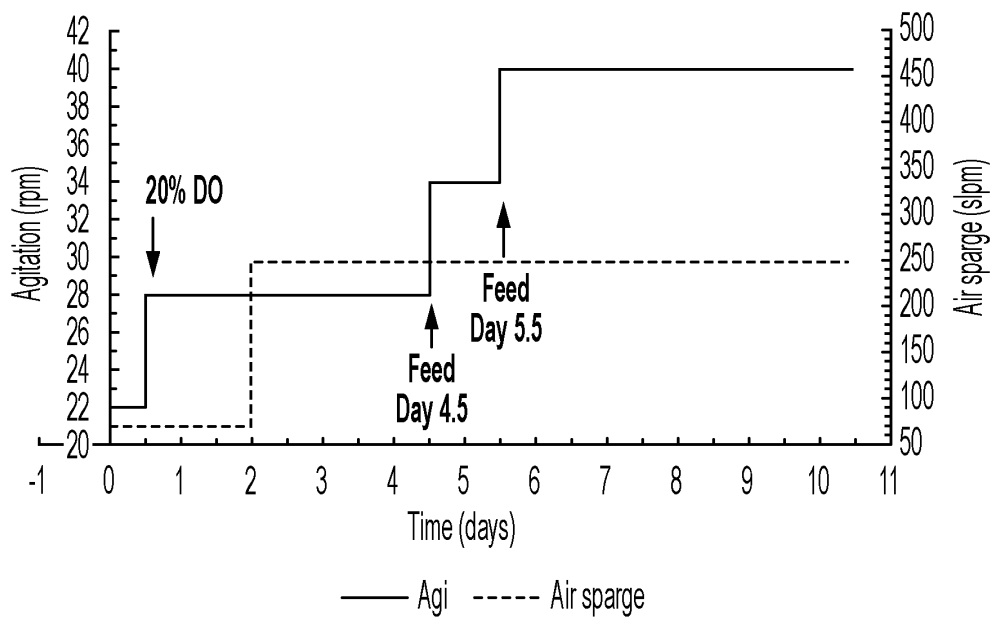


FIG. 46

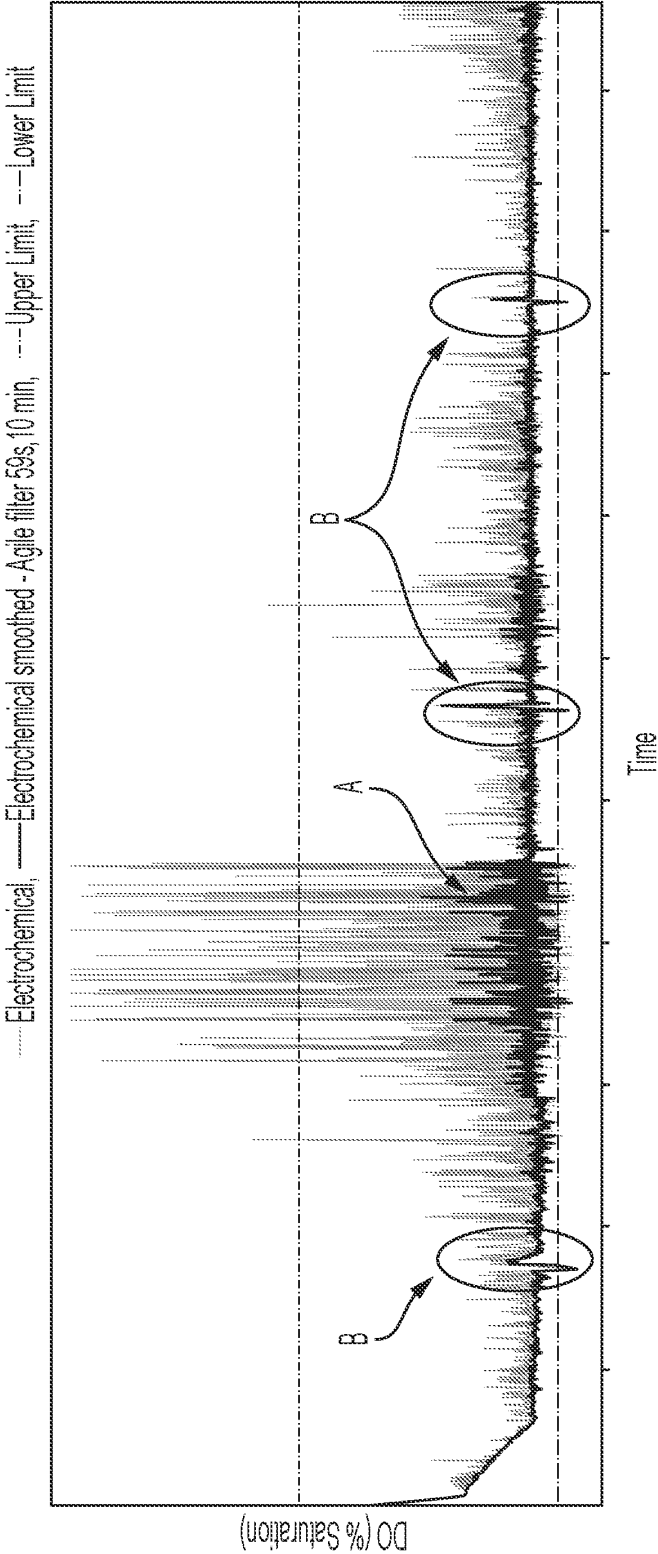


FIG. 47

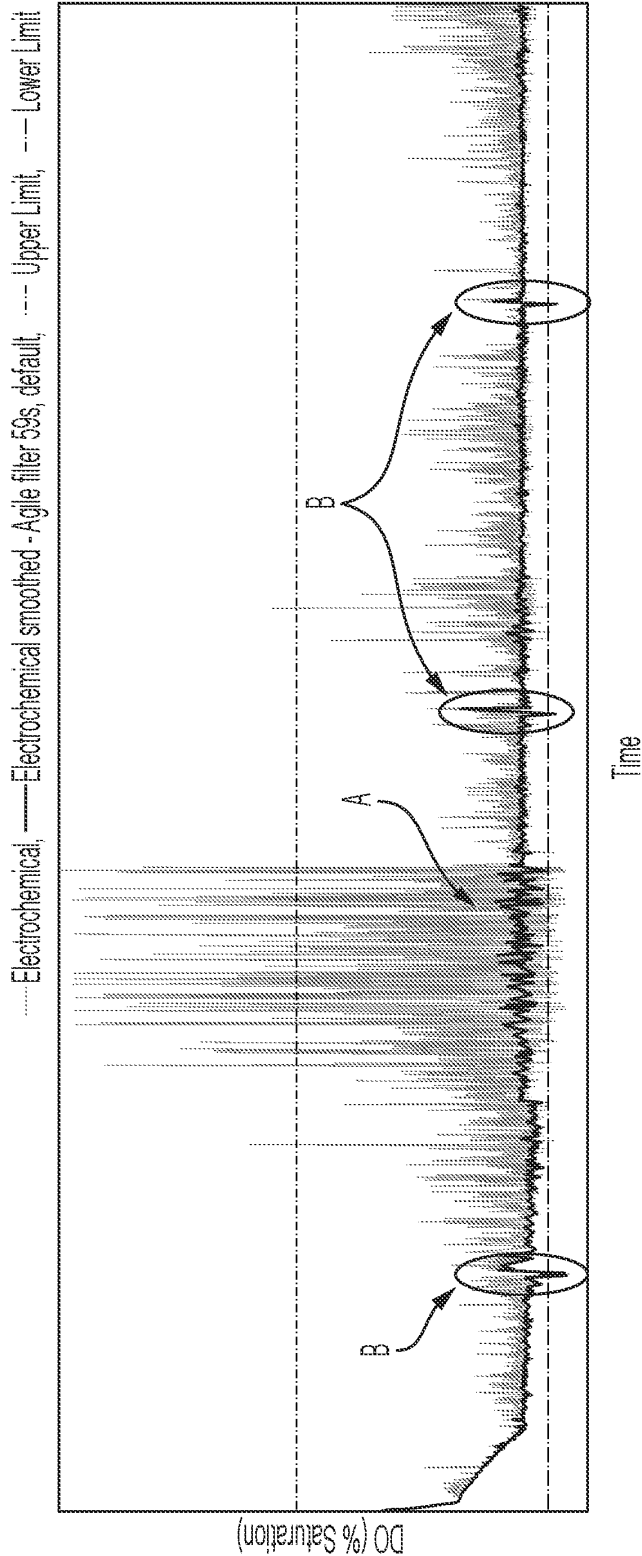


FIG. 48

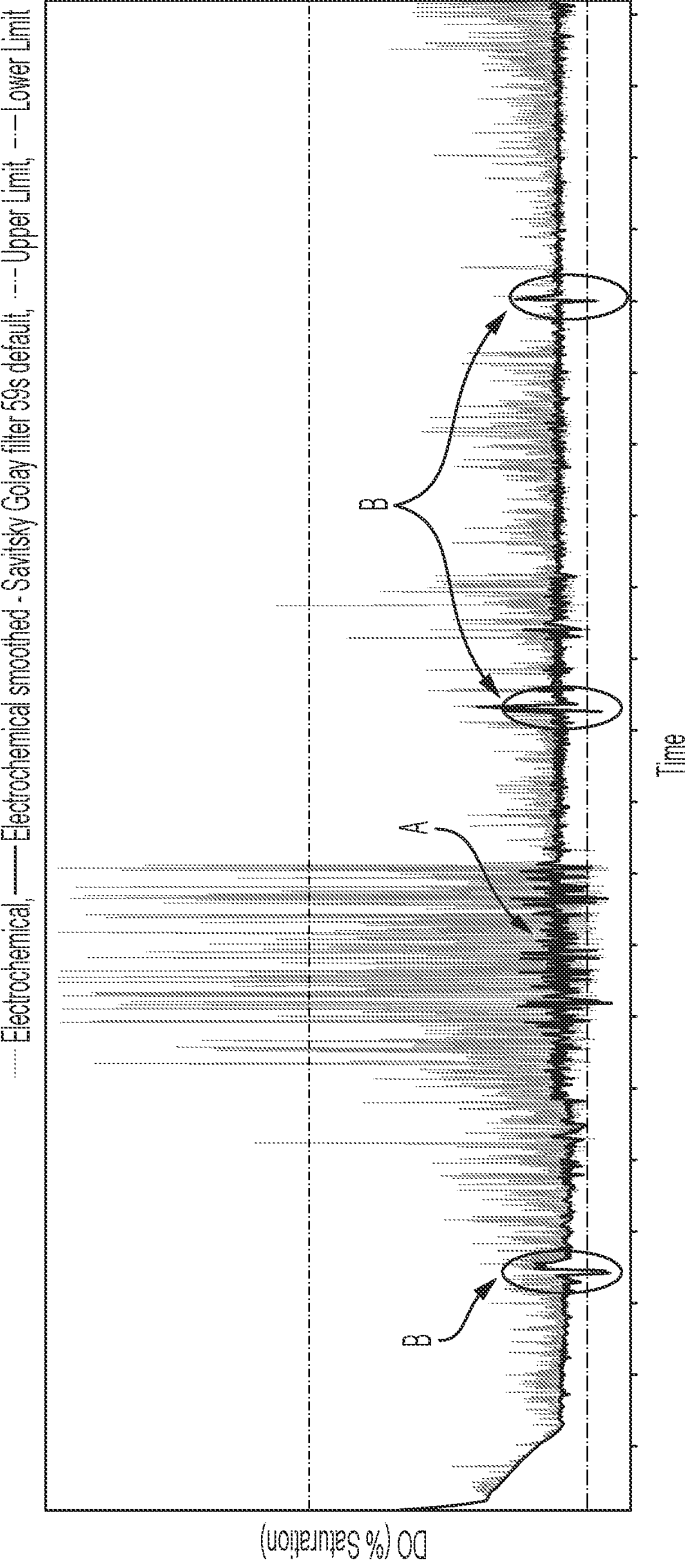


FIG. 49

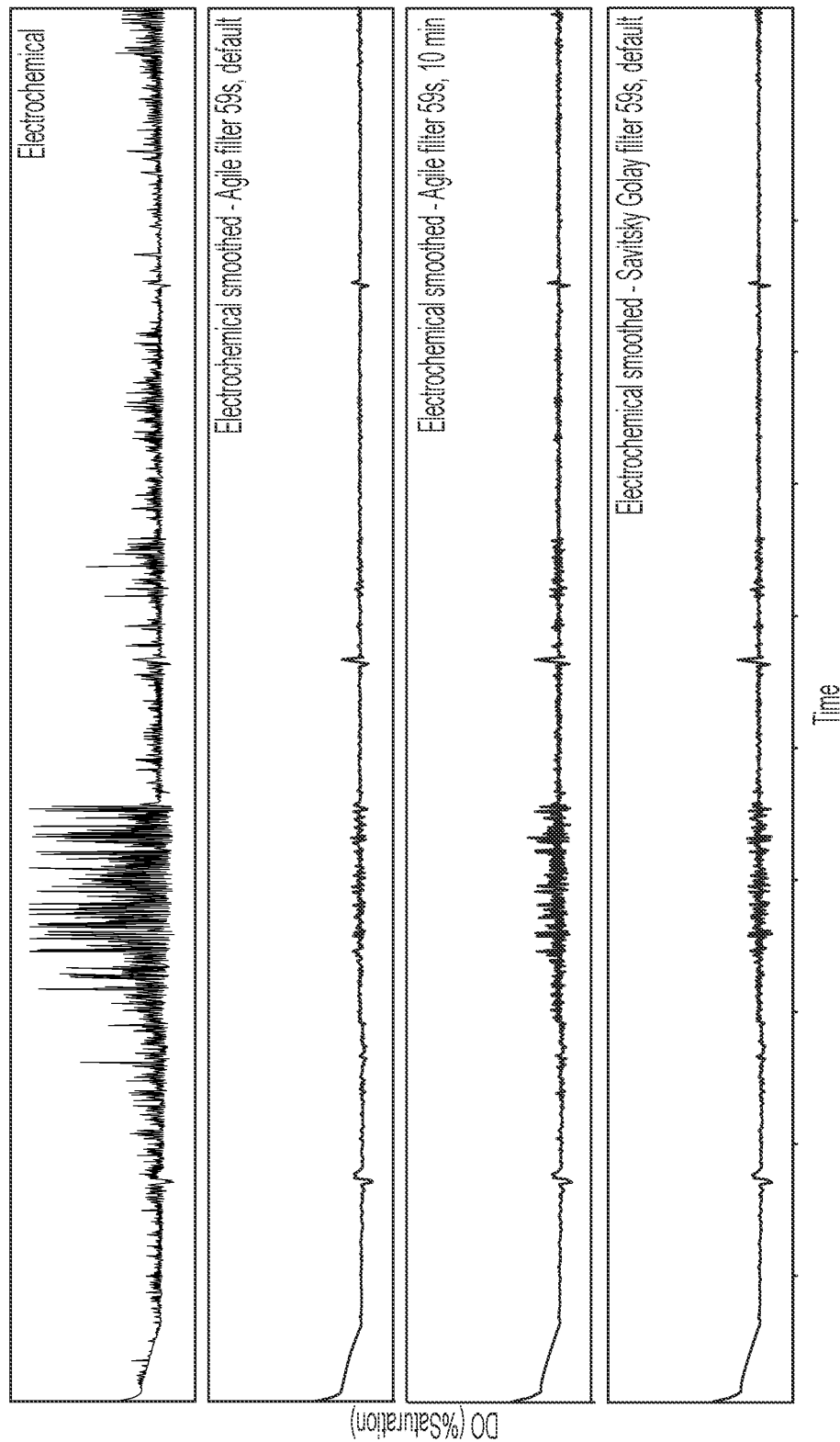


FIG. 50

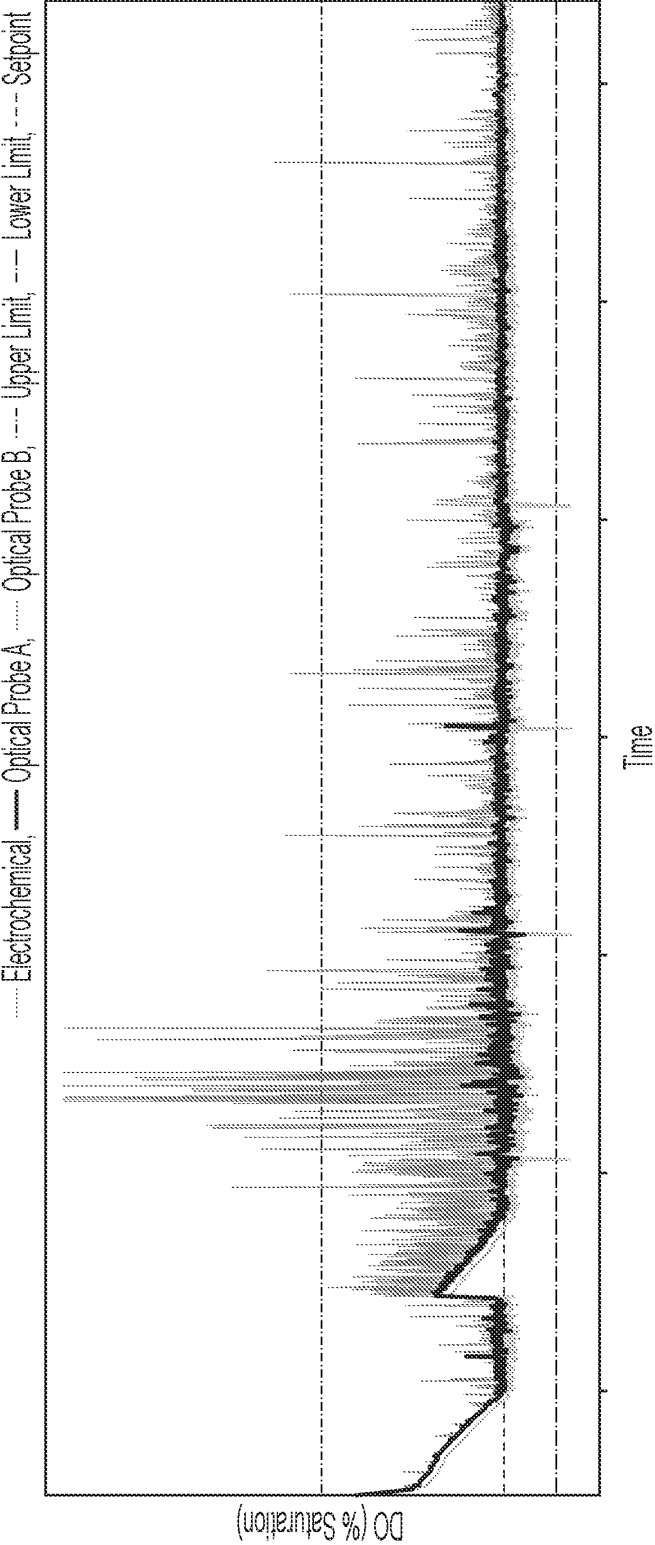


FIG. 51

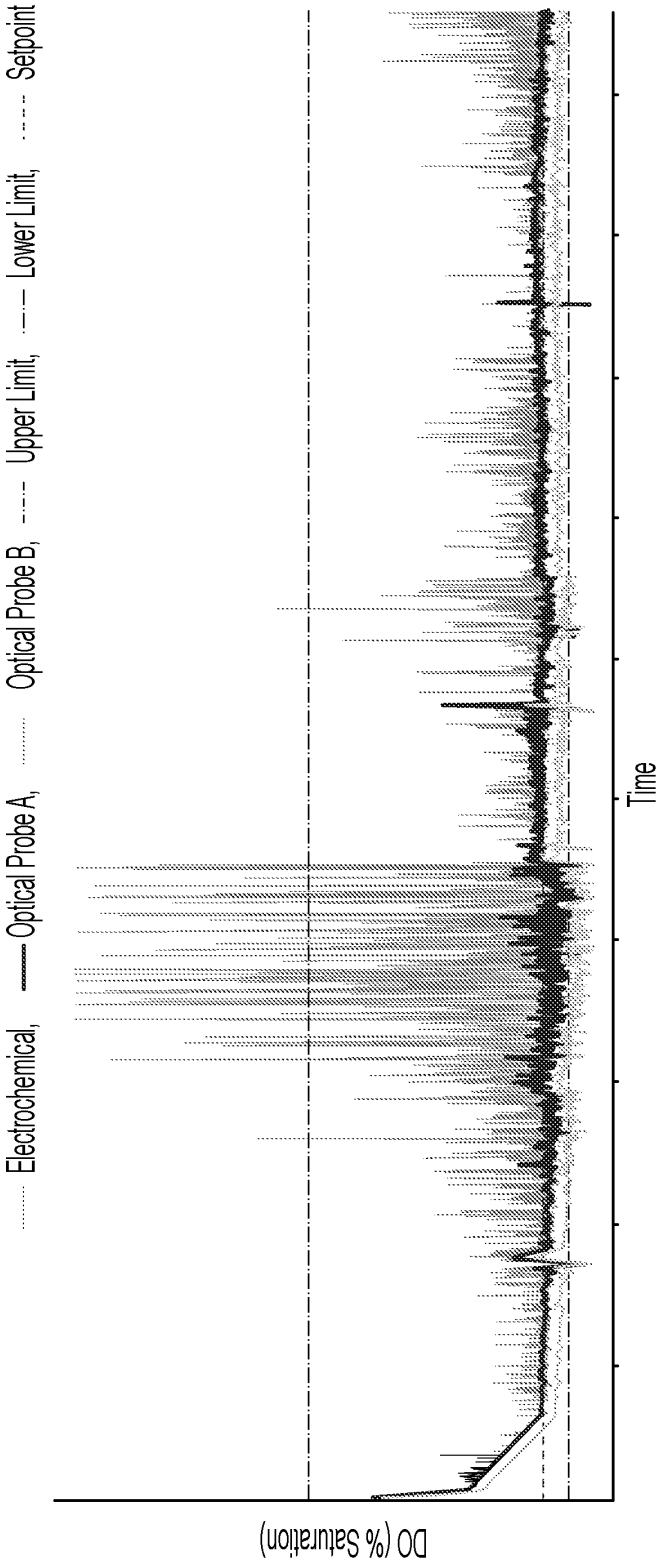


FIG. 52

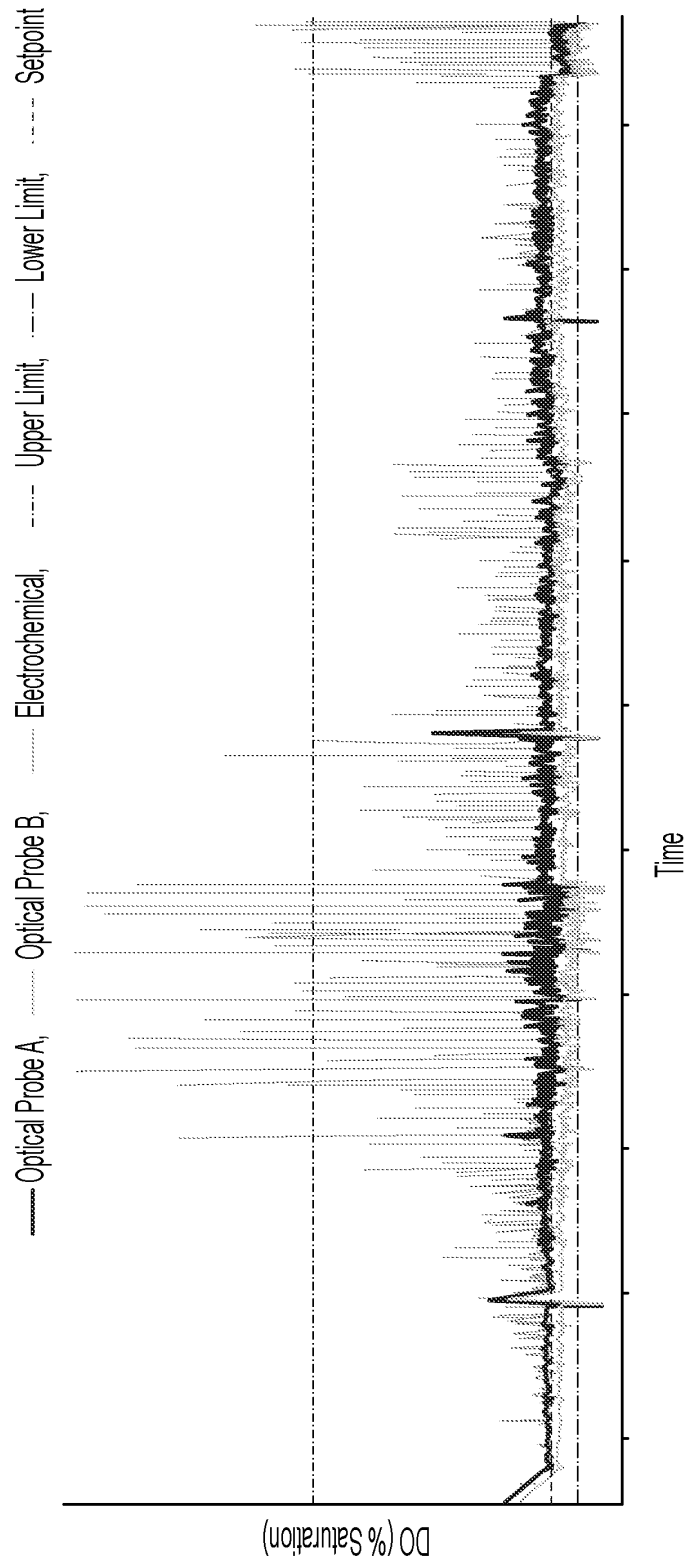


FIG. 53

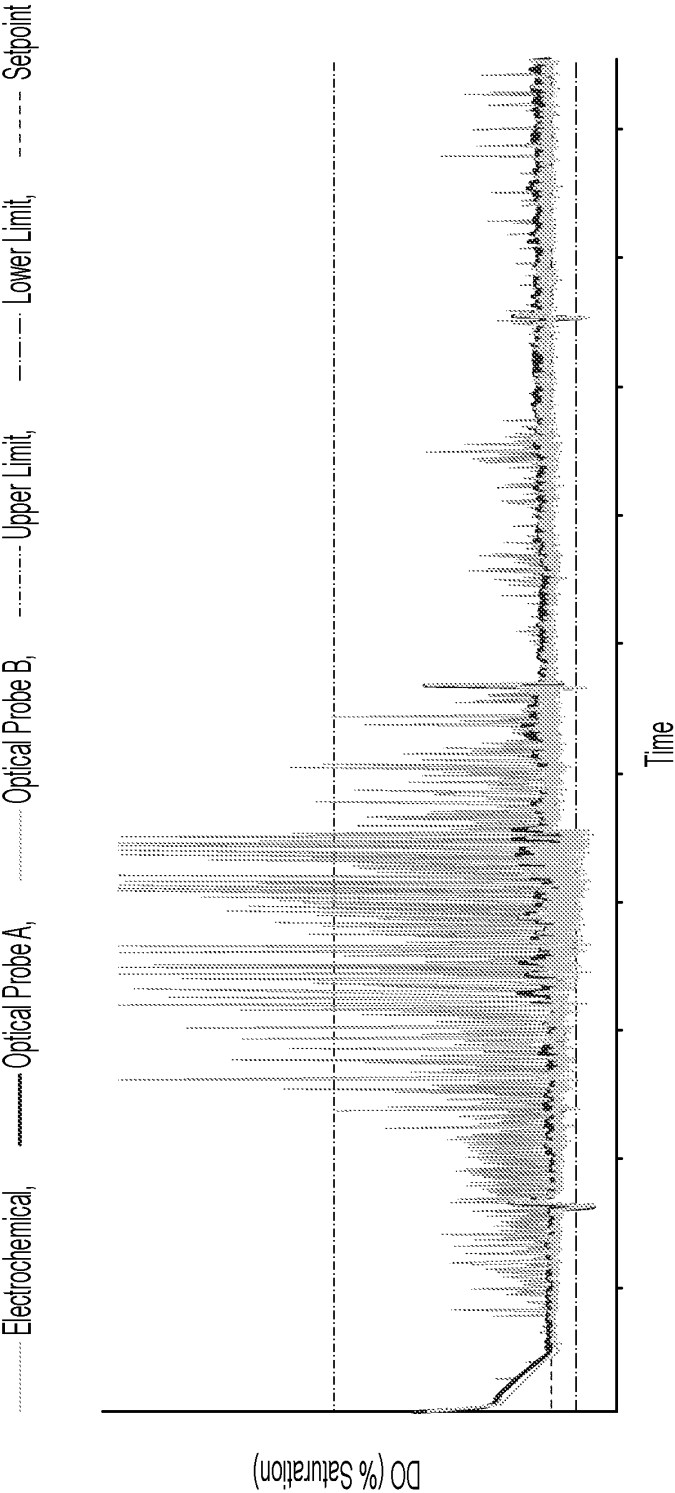


FIG. 54

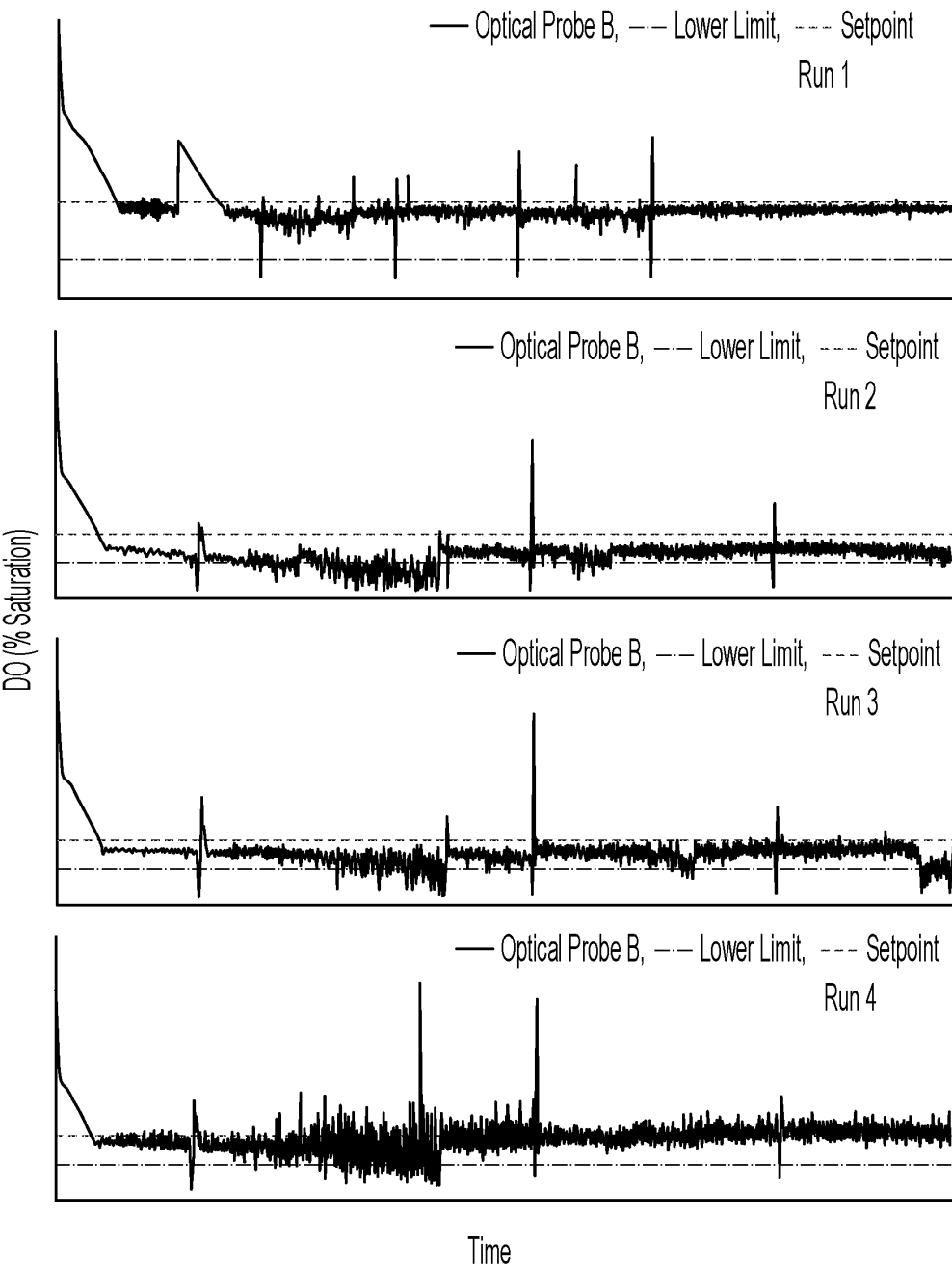


FIG. 55

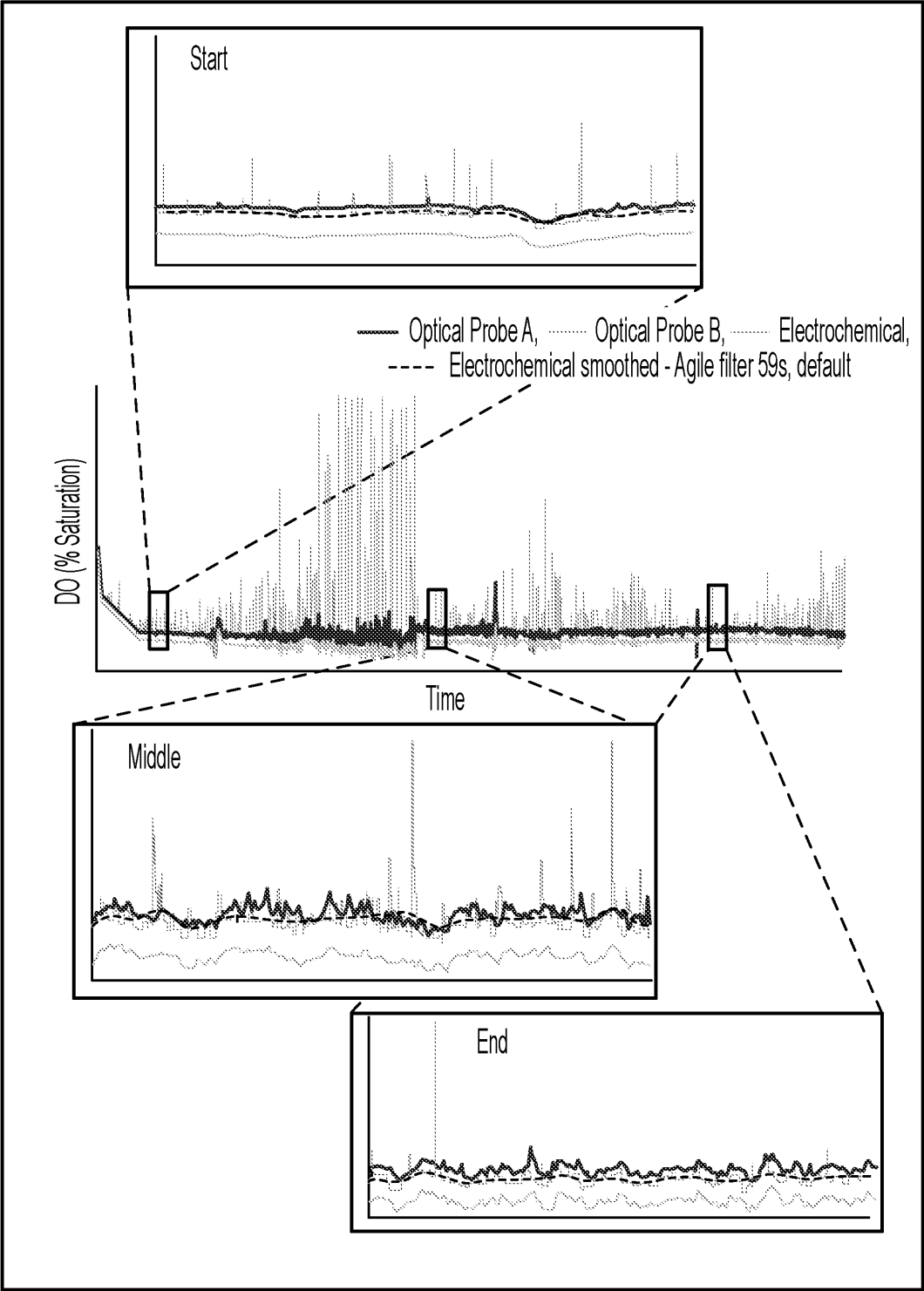


FIG. 56

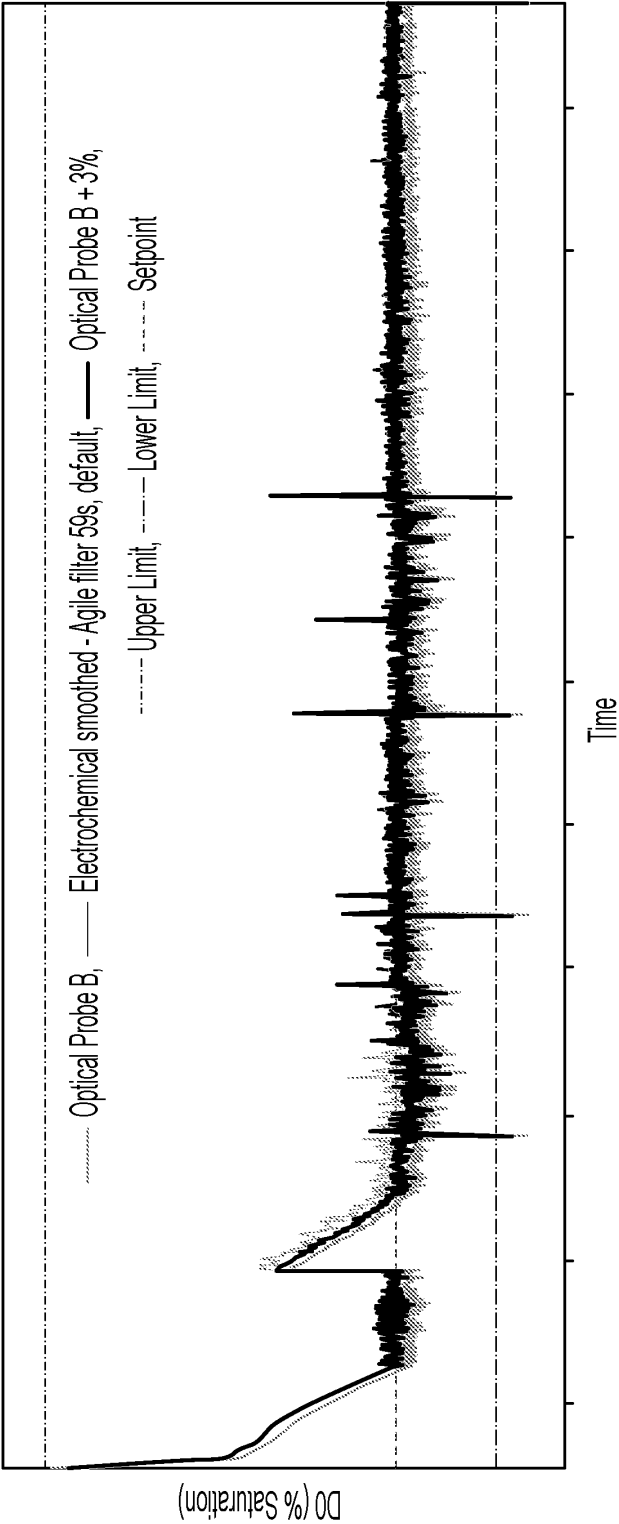


FIG. 57

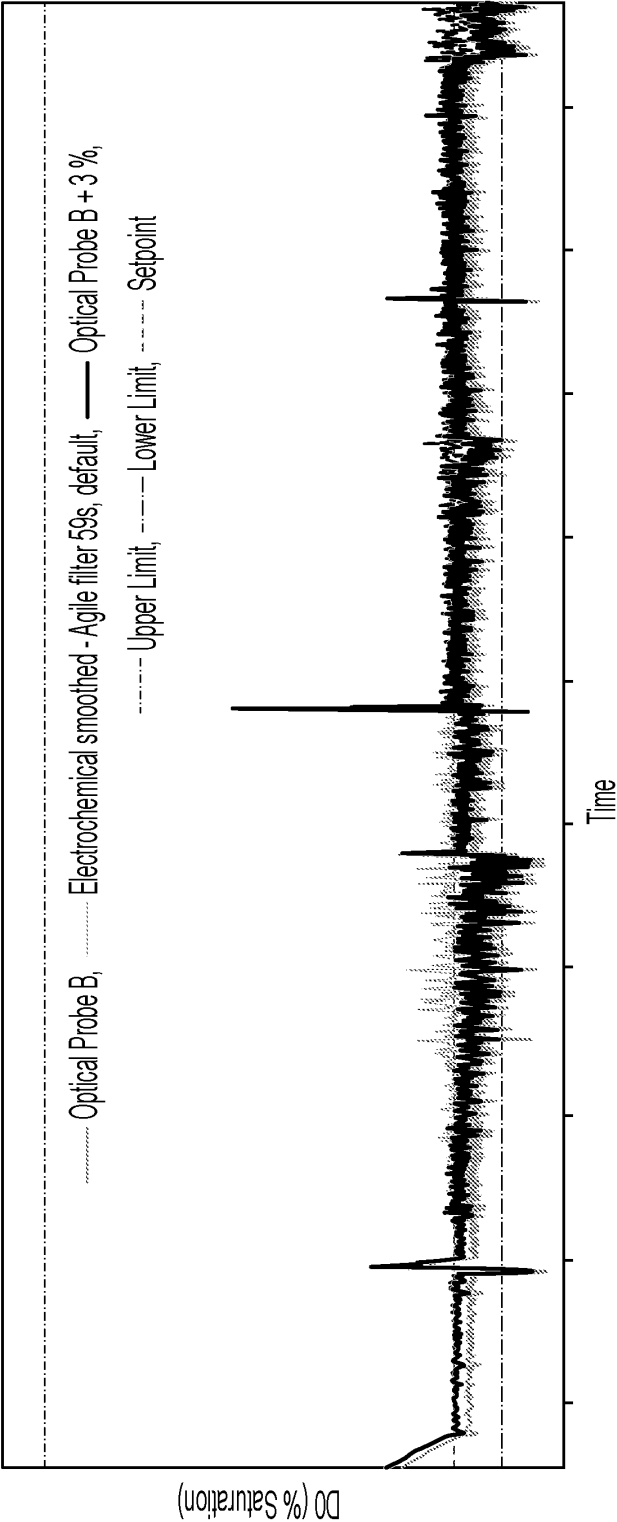


FIG. 58B

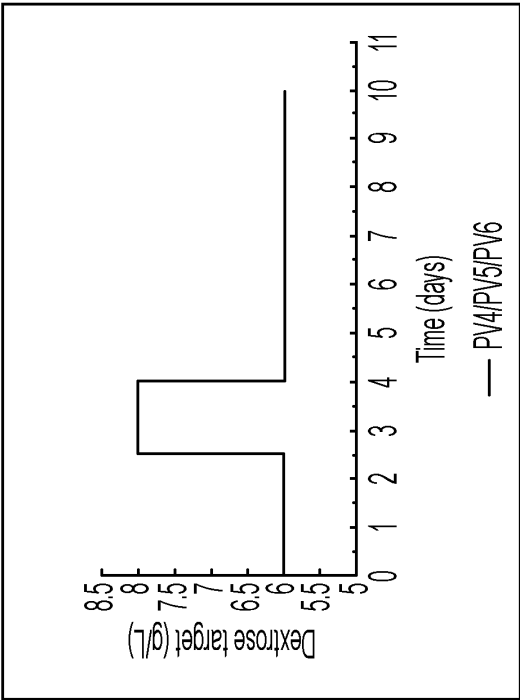
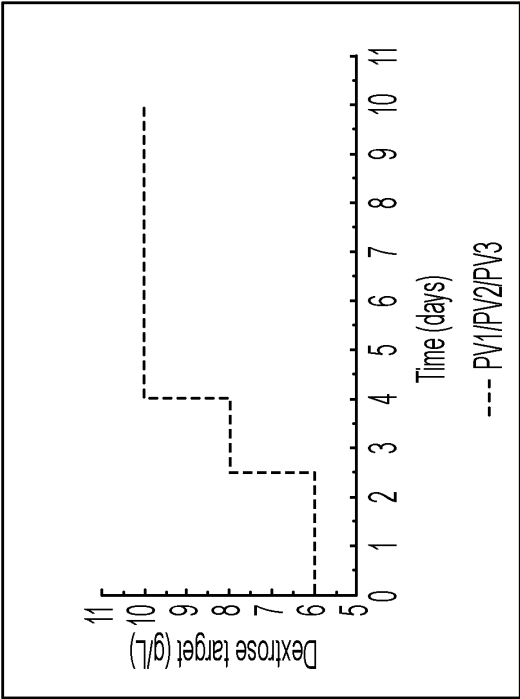


FIG. 58A



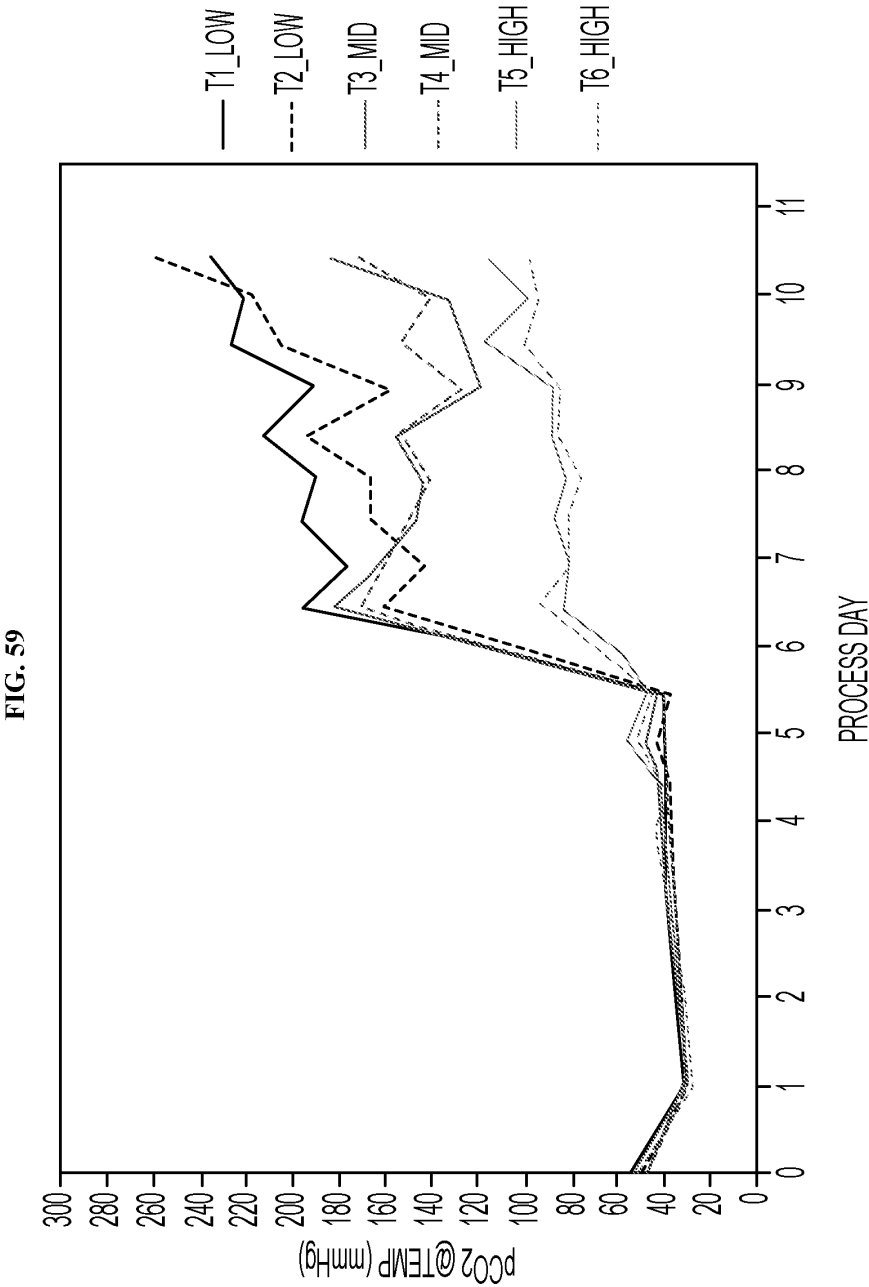


FIG. 60

