

FIG. 1

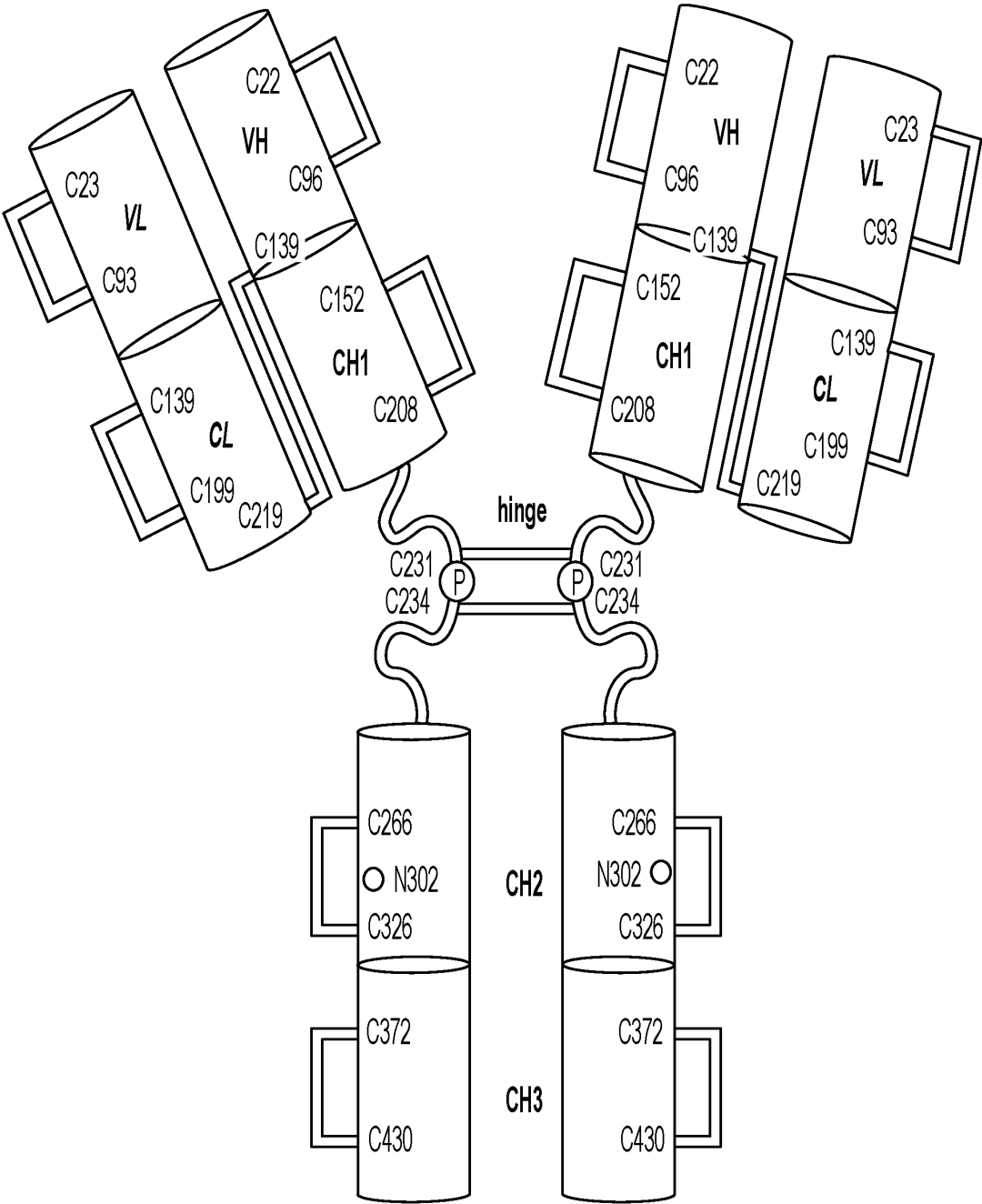


FIG. 2

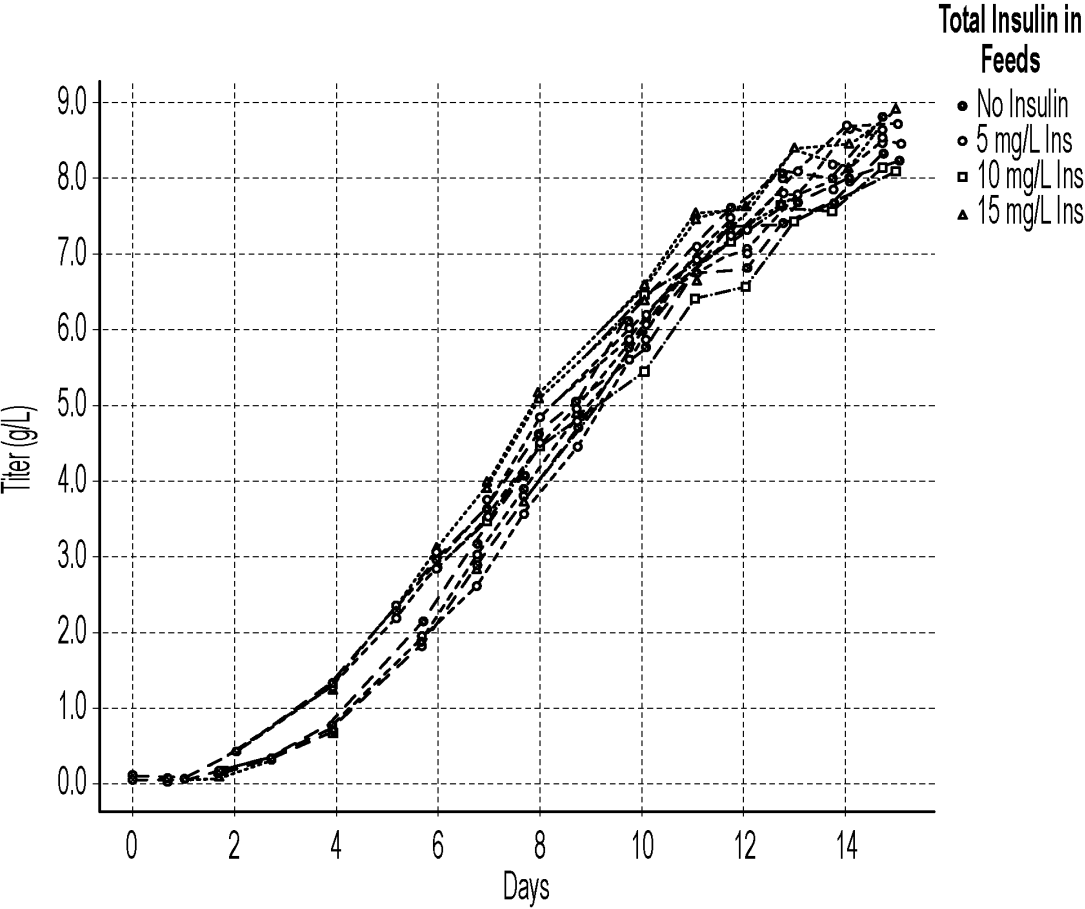


FIG. 3

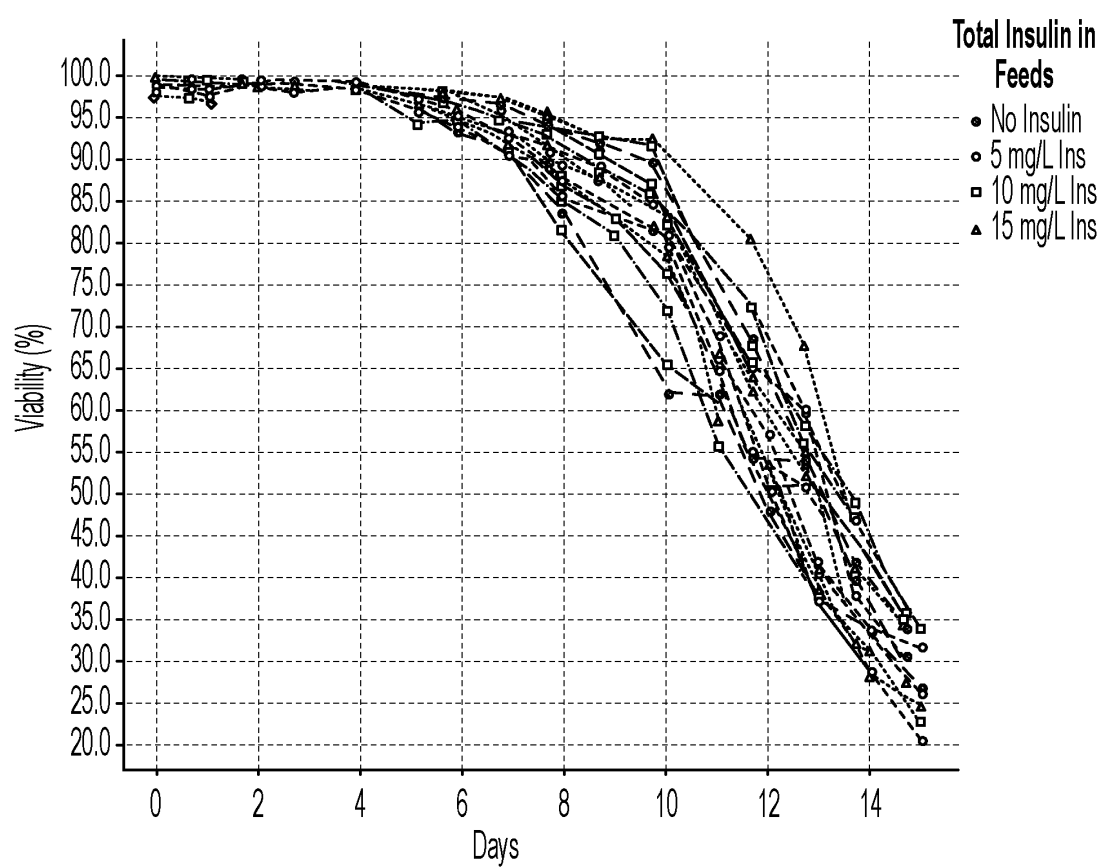


FIG. 4

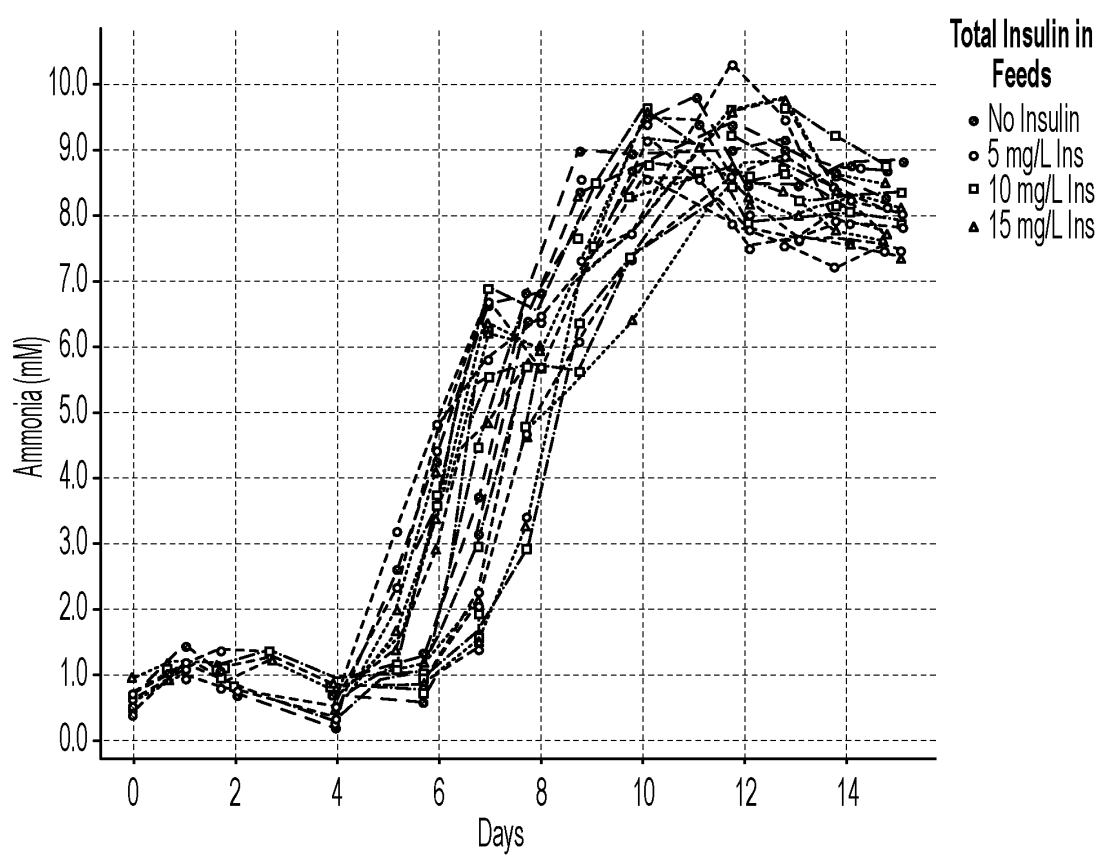


FIG. 5

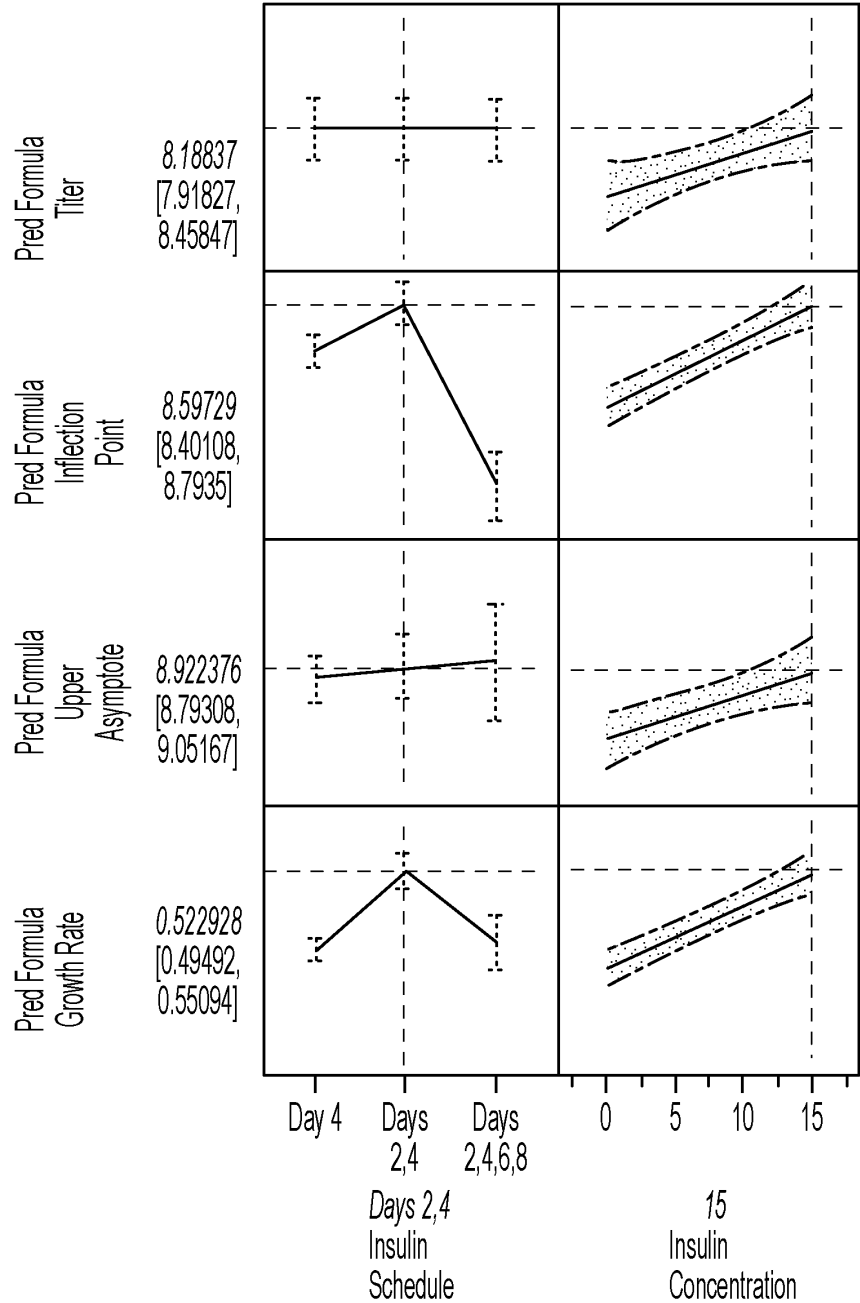


FIG. 6

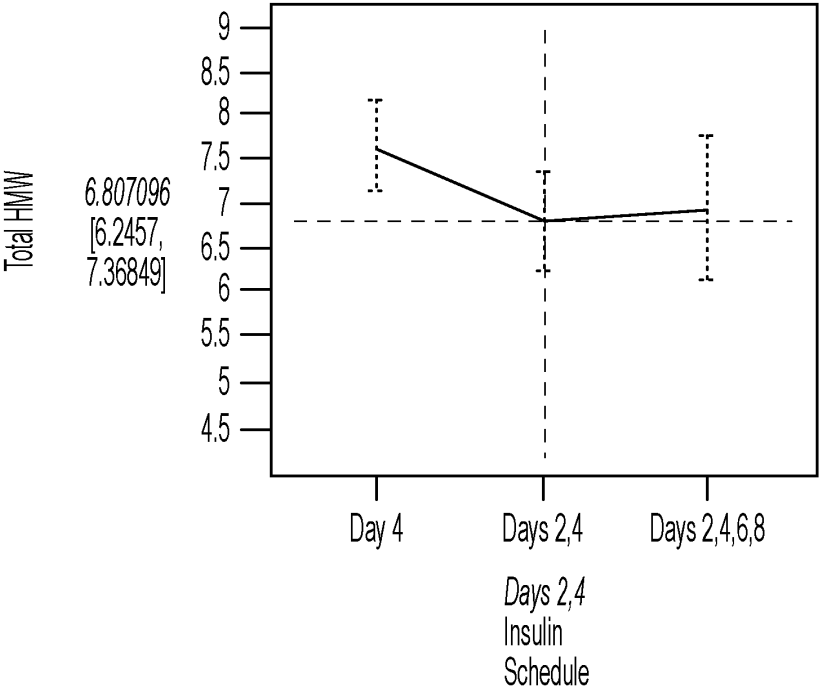


FIG. 7

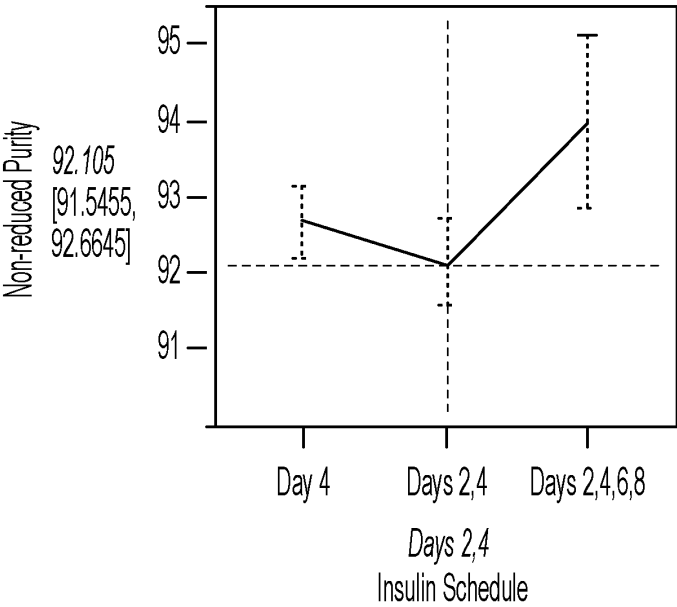


FIG. 8

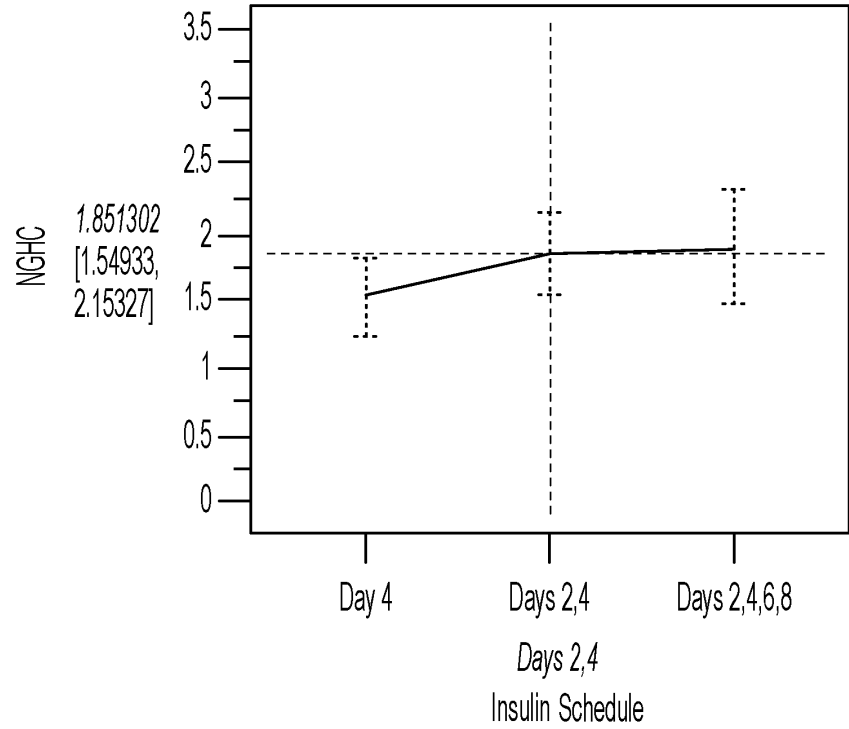


FIG. 9

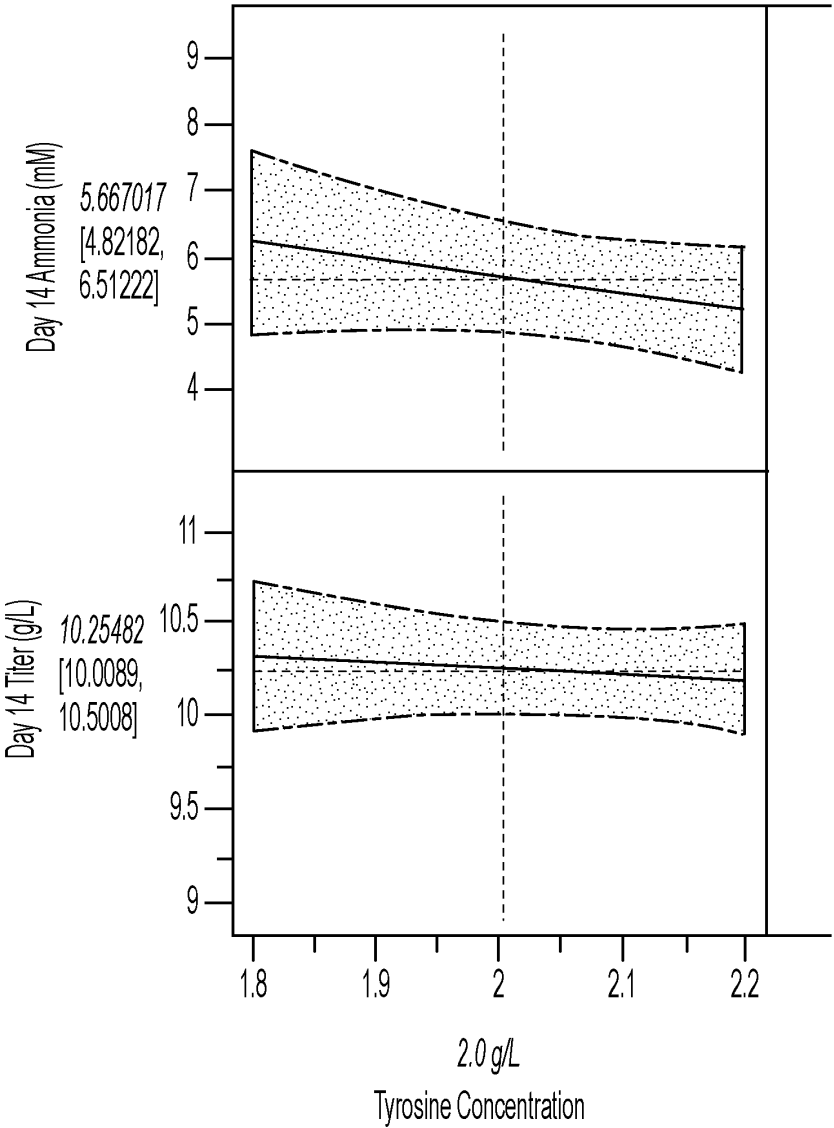


FIG. 10

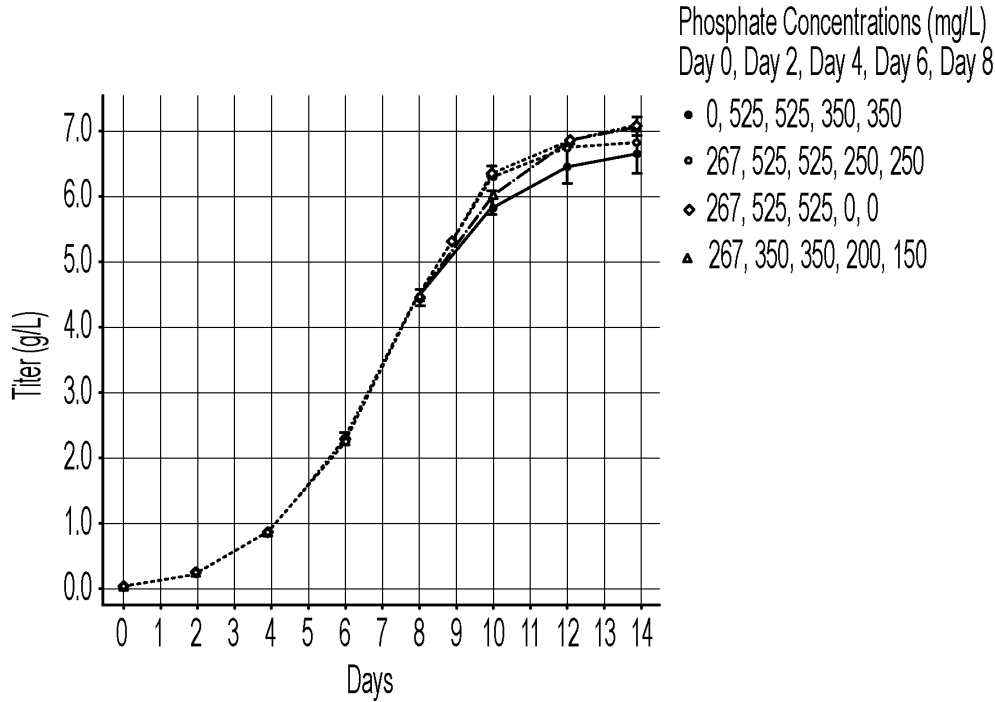


FIG. 11

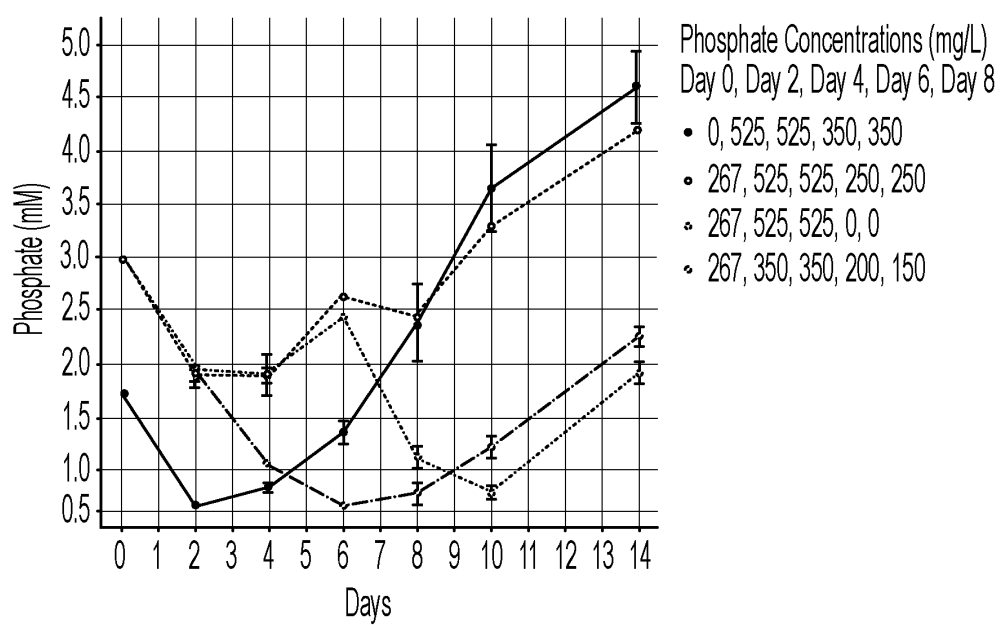


FIG. 12B

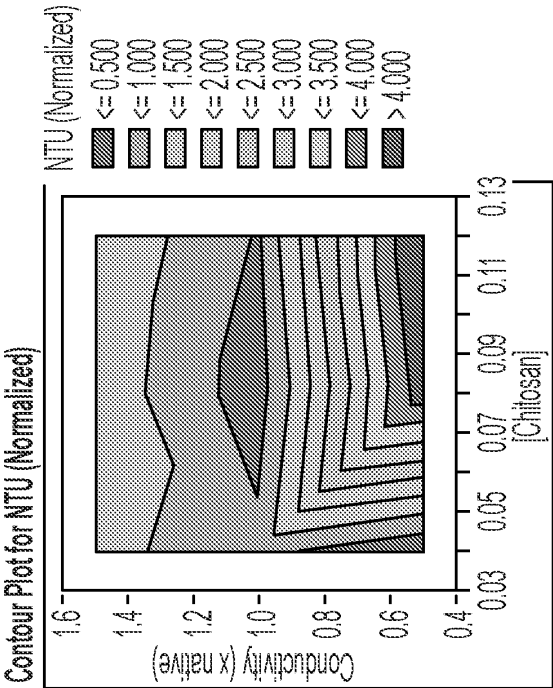


FIG. 12A

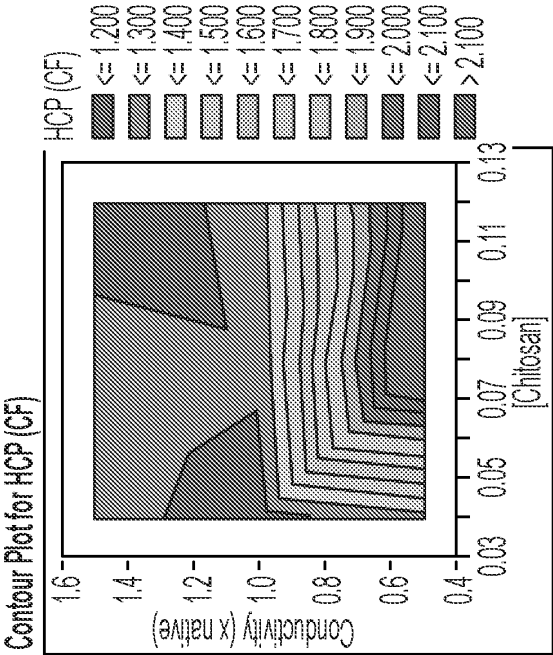


FIG. 13B

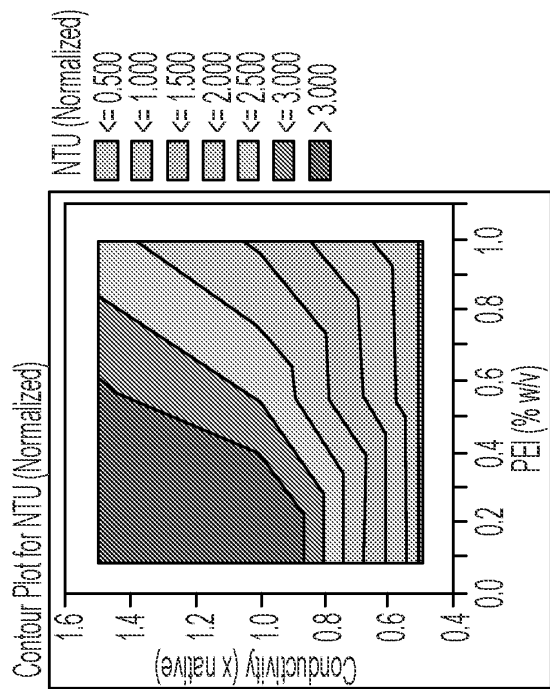


FIG. 13A

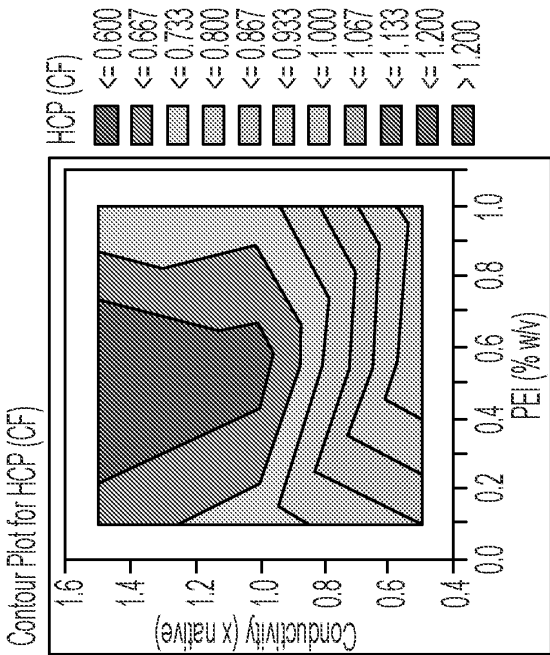


FIG. 14

	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

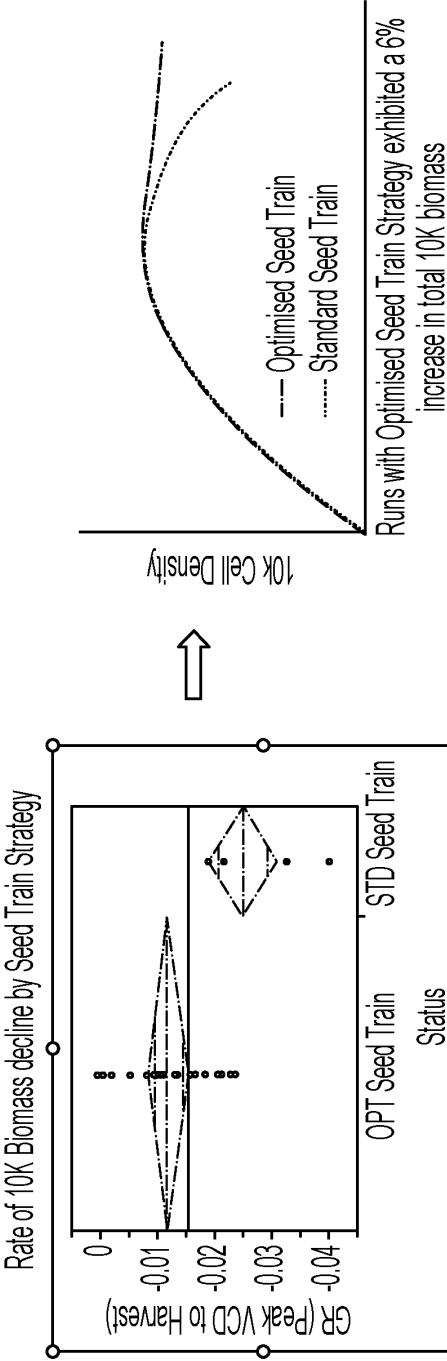


FIG. 16A

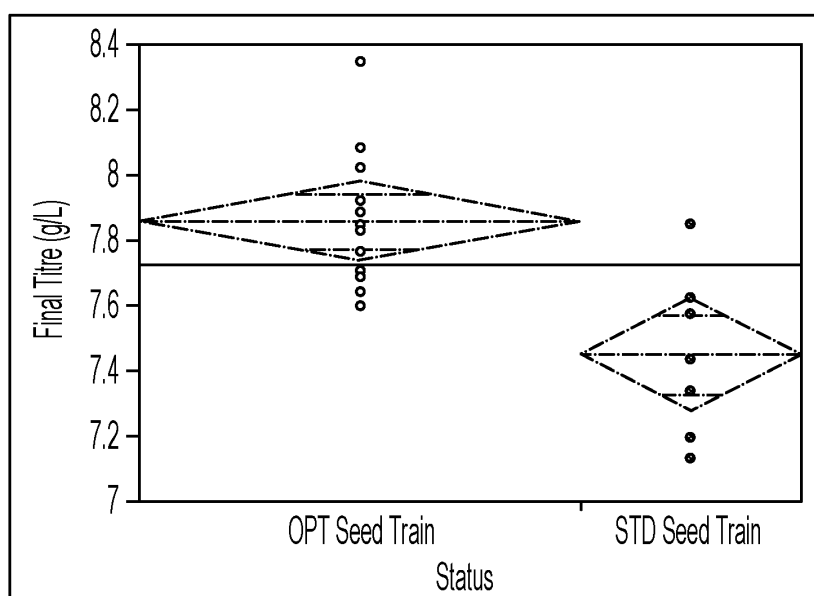


FIG. 16B

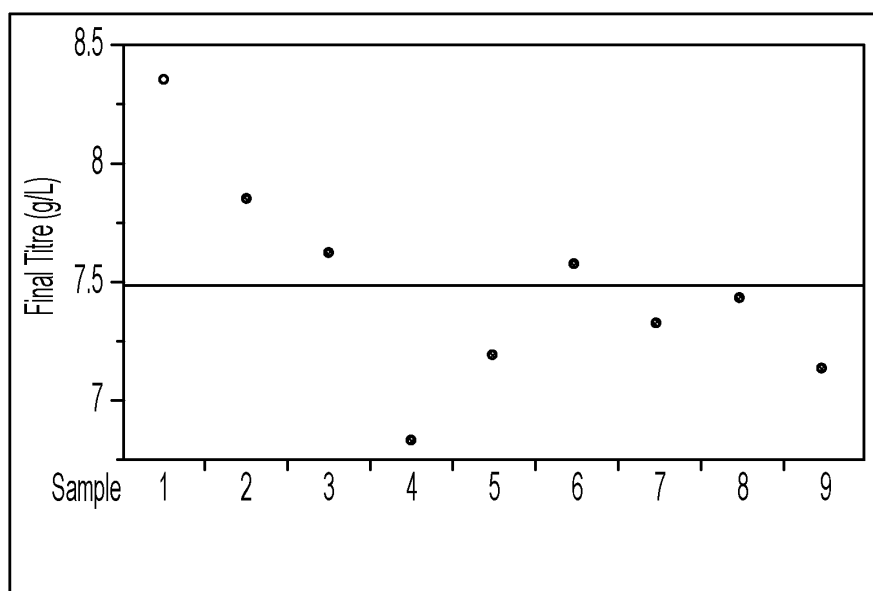


FIG. 17

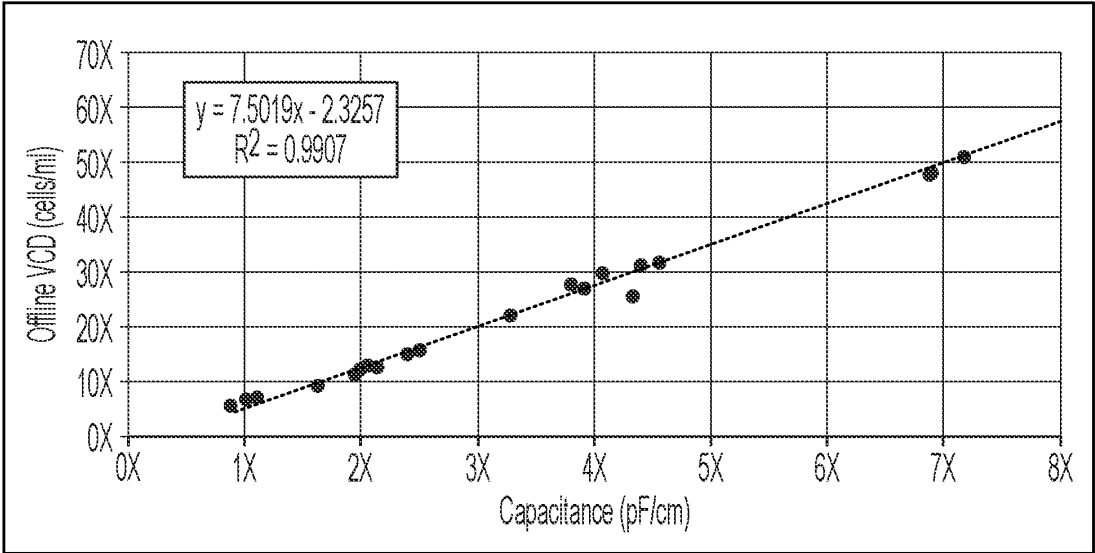


FIG. 18

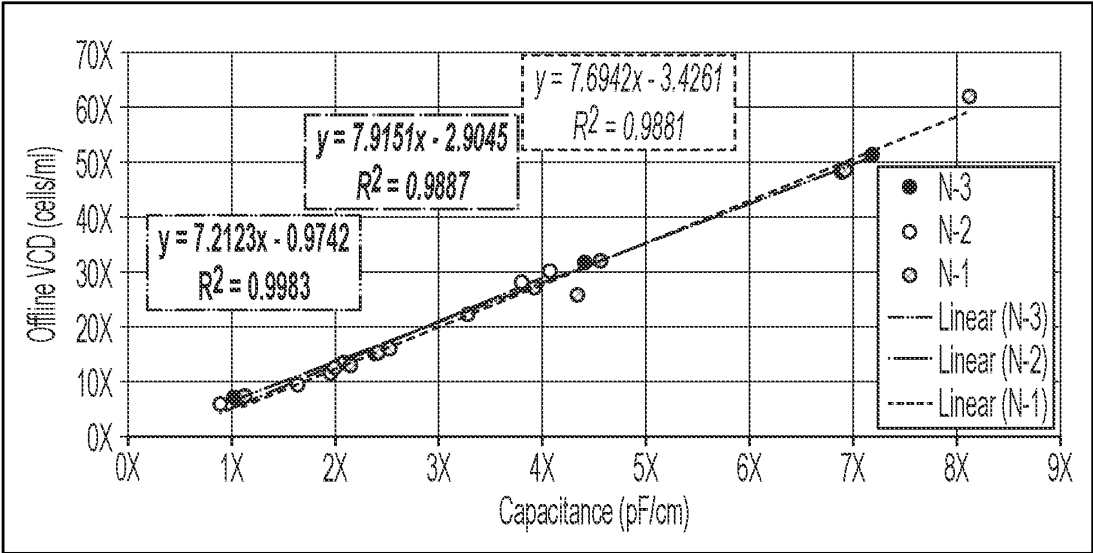


FIG. 19

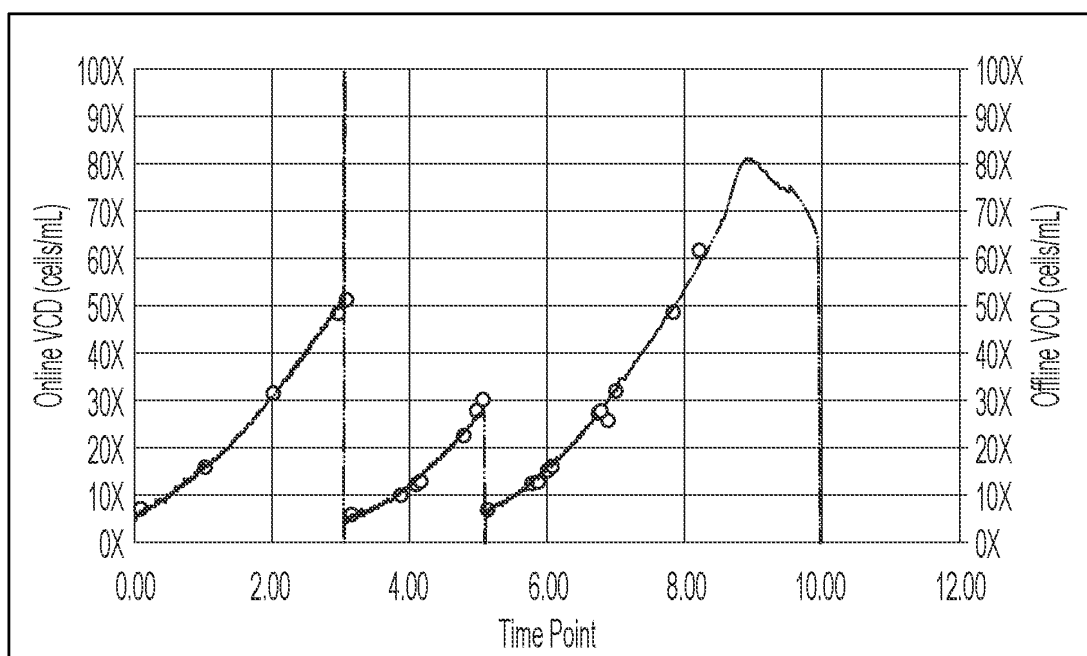


FIG. 20

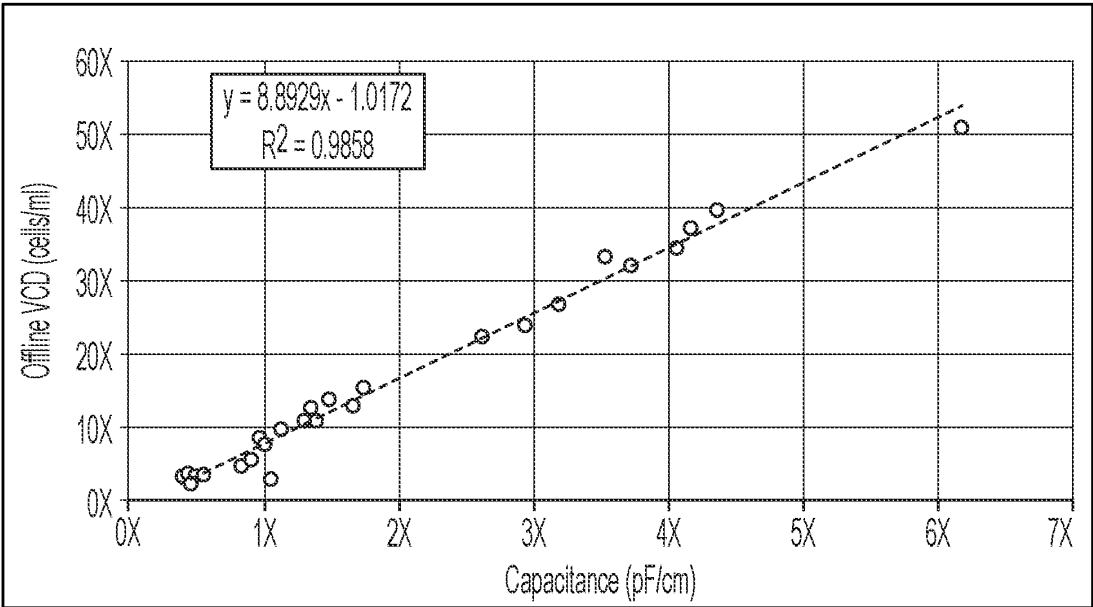


FIG. 21

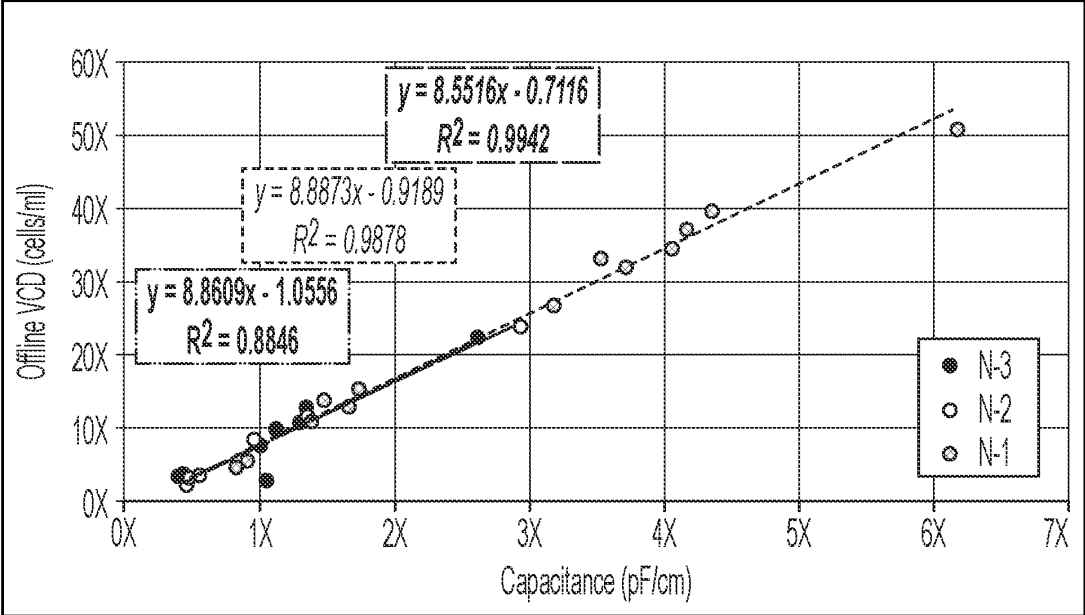


FIG. 22

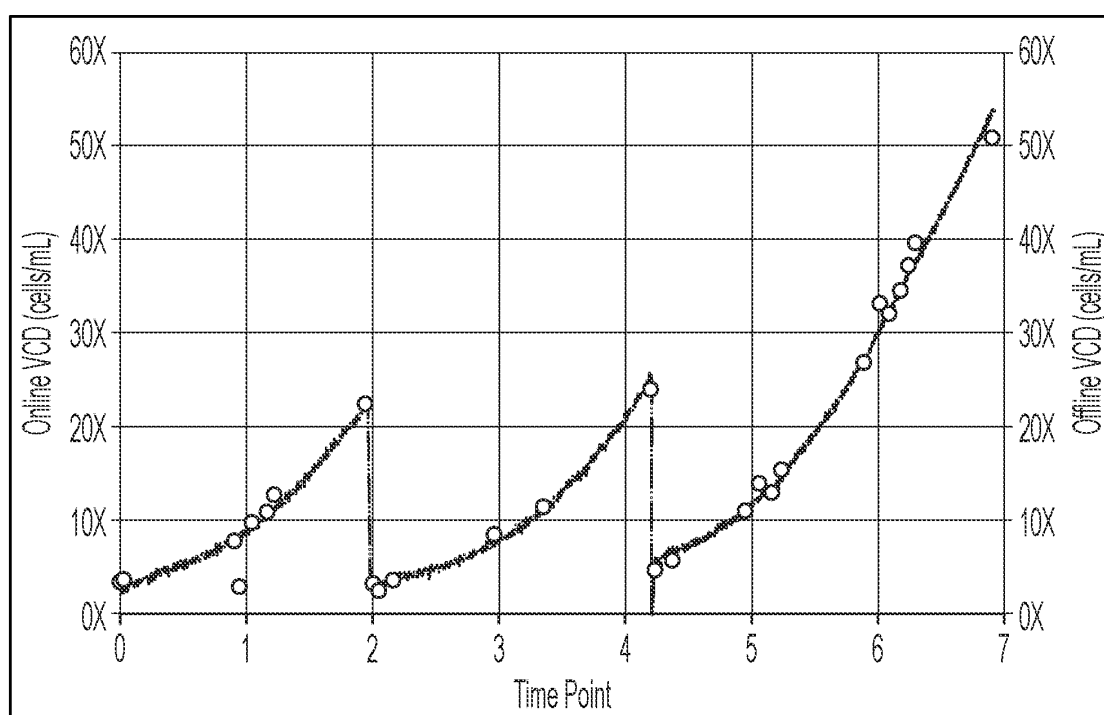


FIG. 23

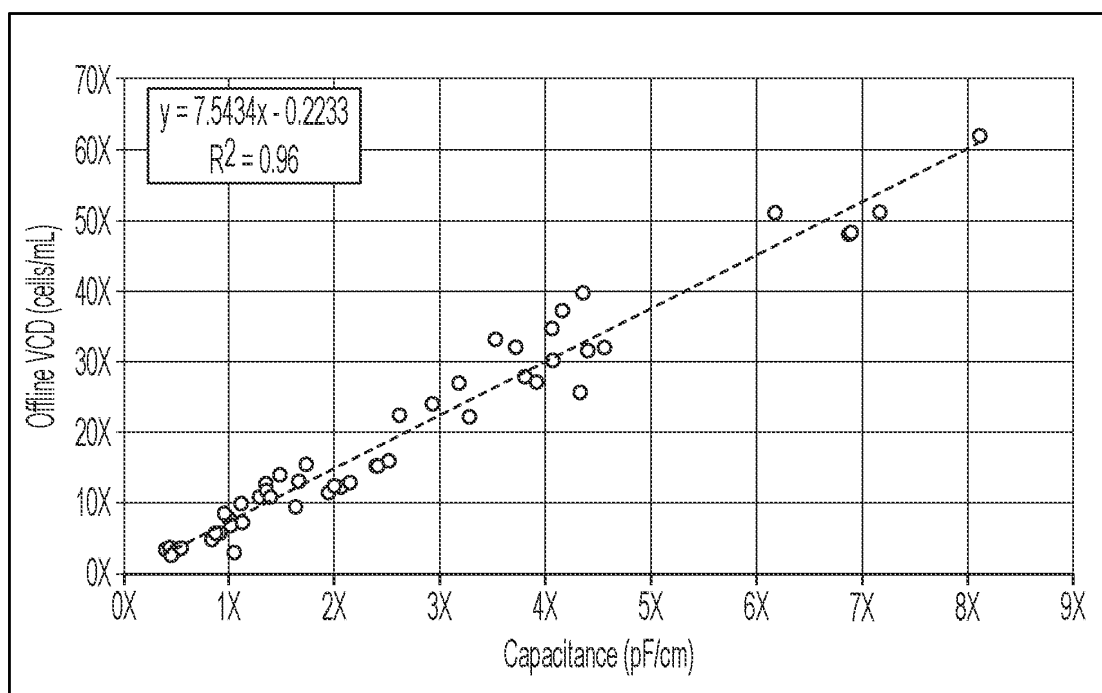


FIG. 24A

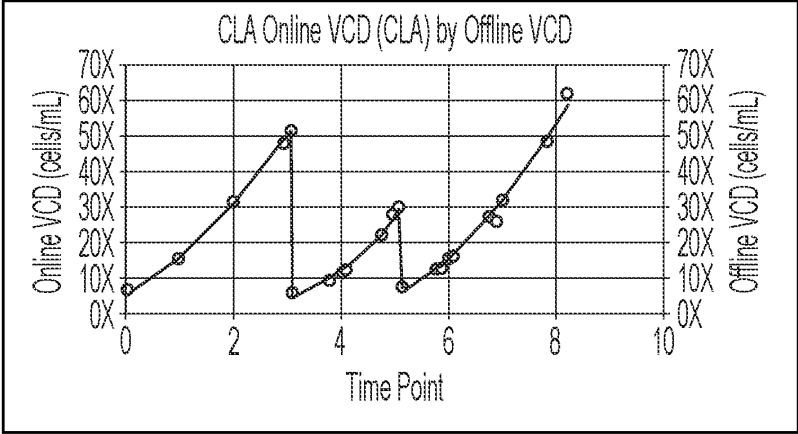


FIG. 24B

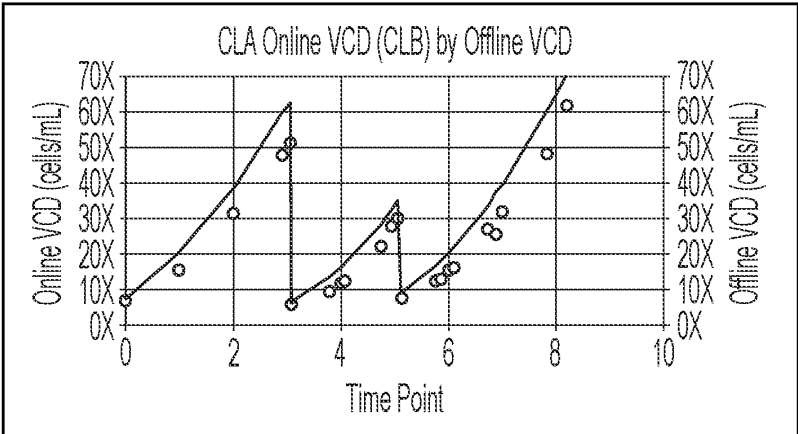


FIG. 24C

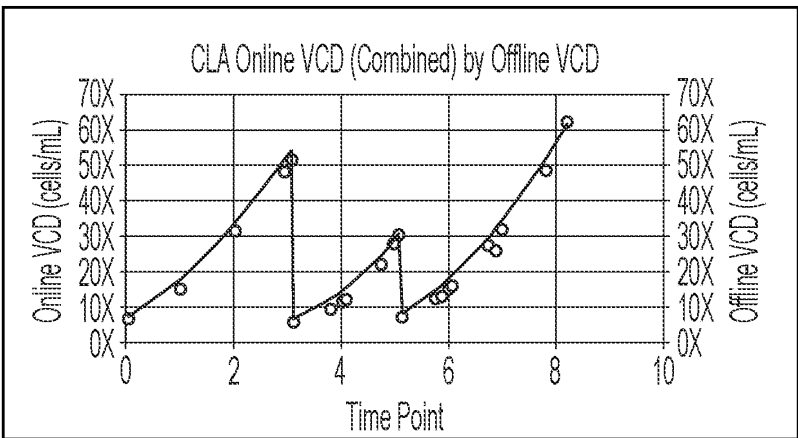


FIG. 25A

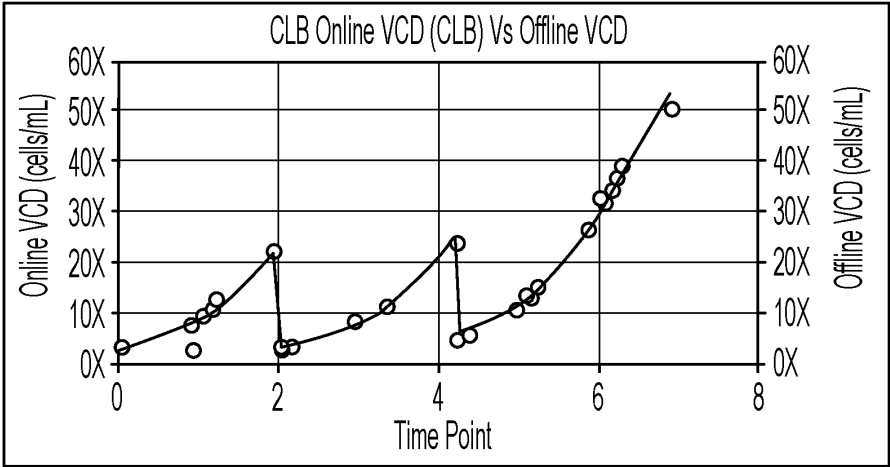


FIG. 25B

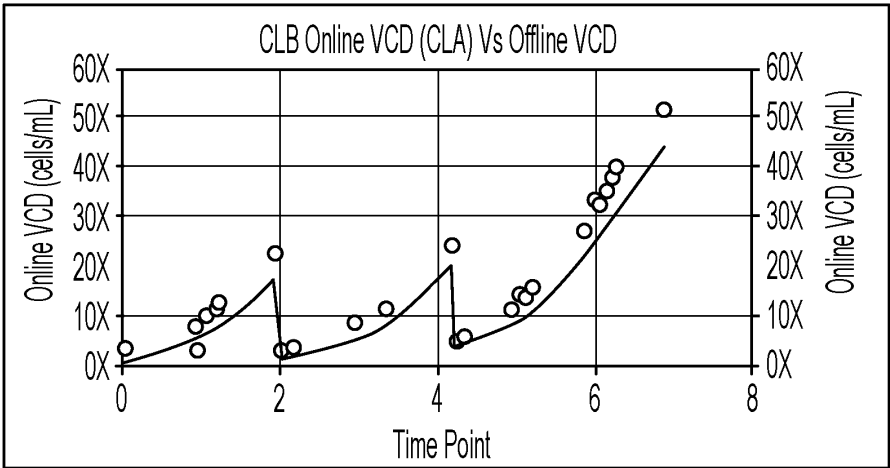


FIG. 25C

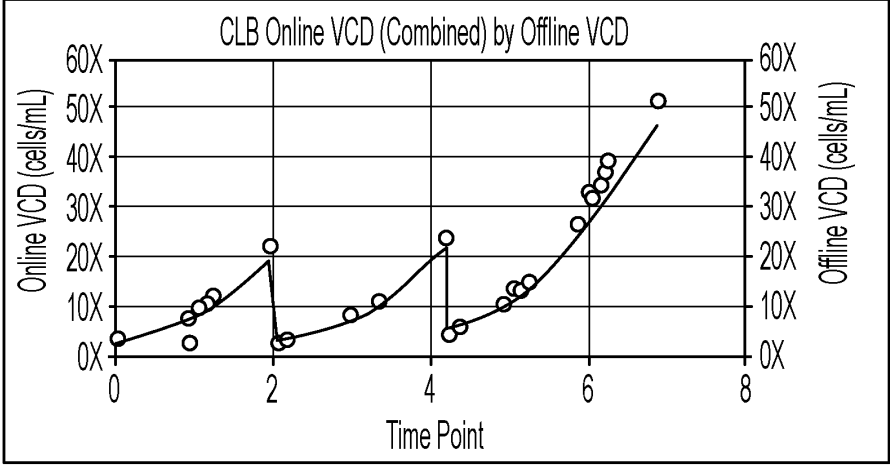


FIG. 26A

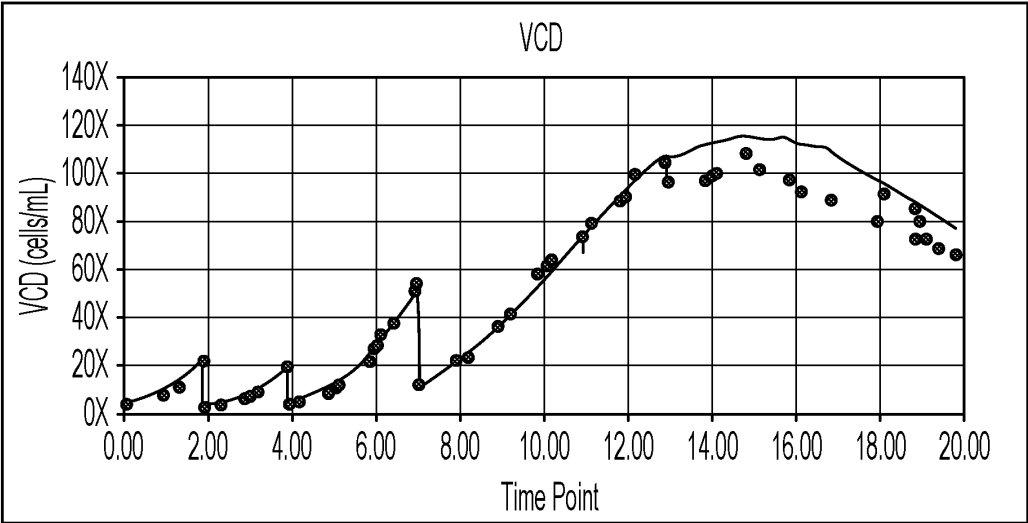


FIG. 26B

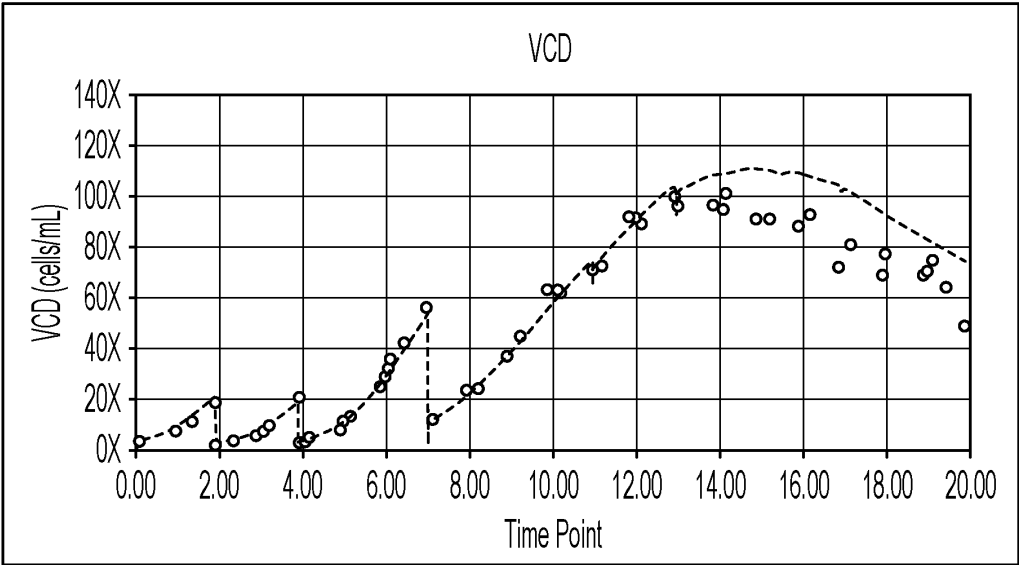


FIG. 27B

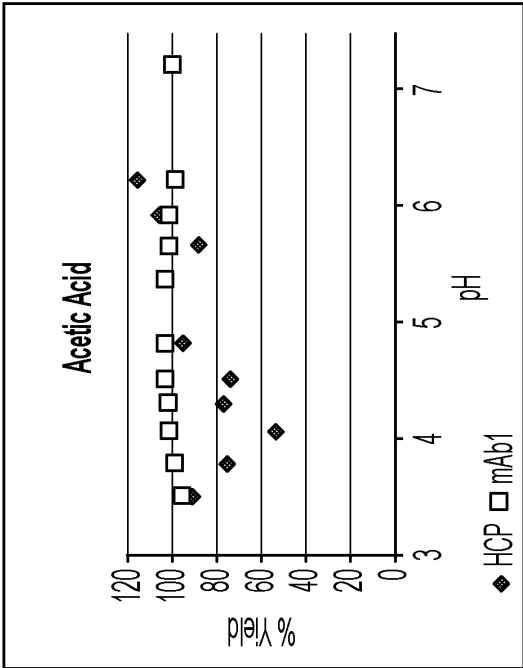


FIG. 27A

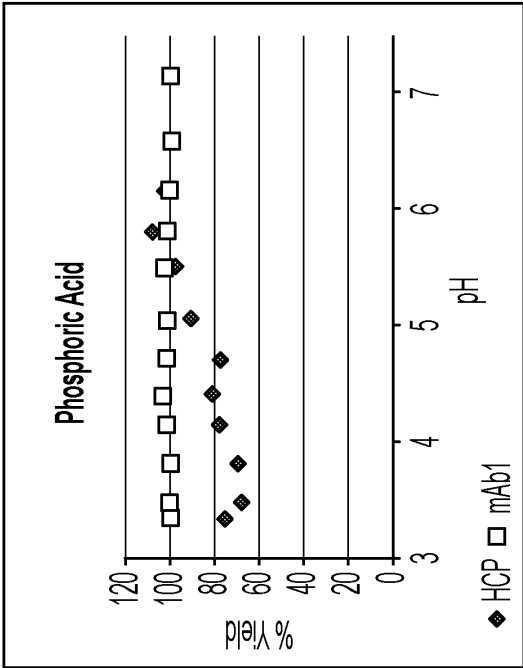


FIG. 28

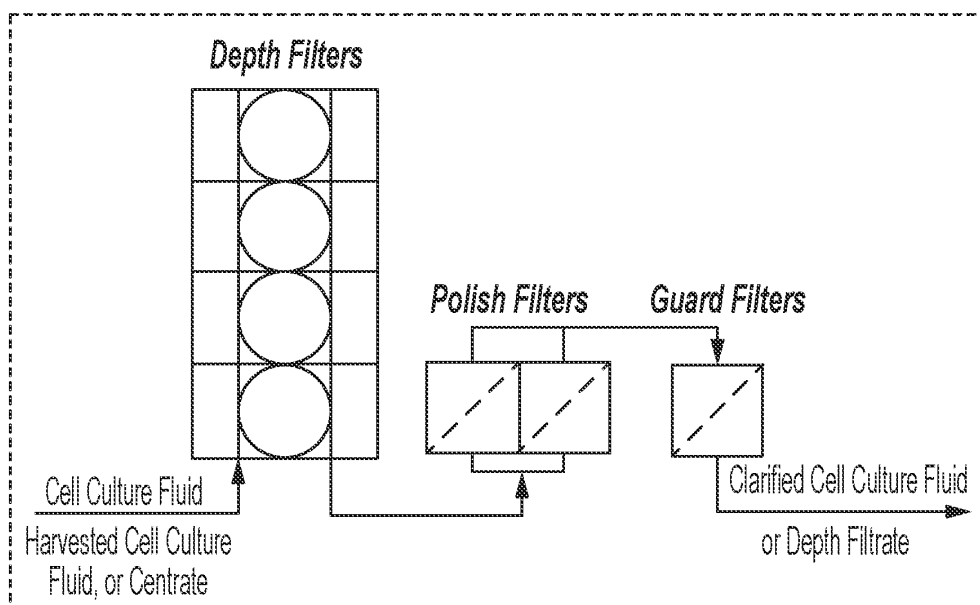


FIG. 29

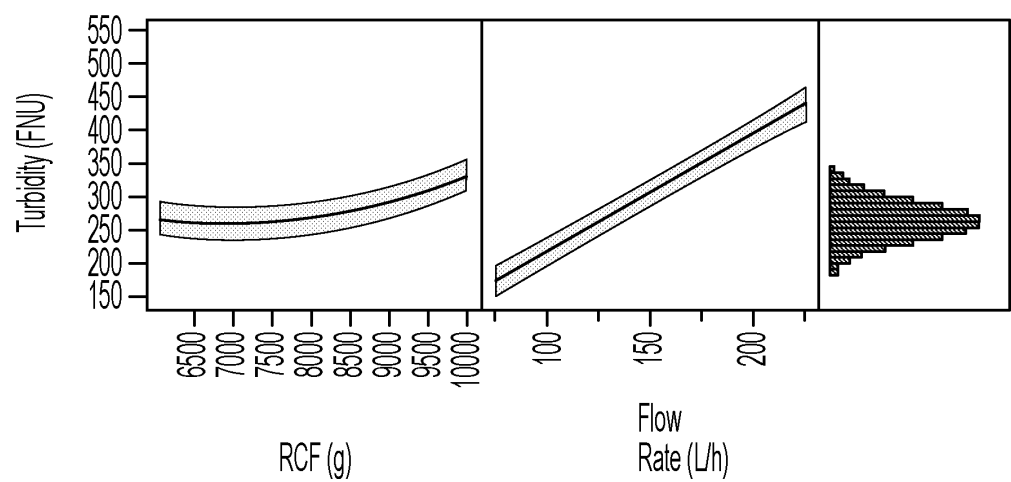


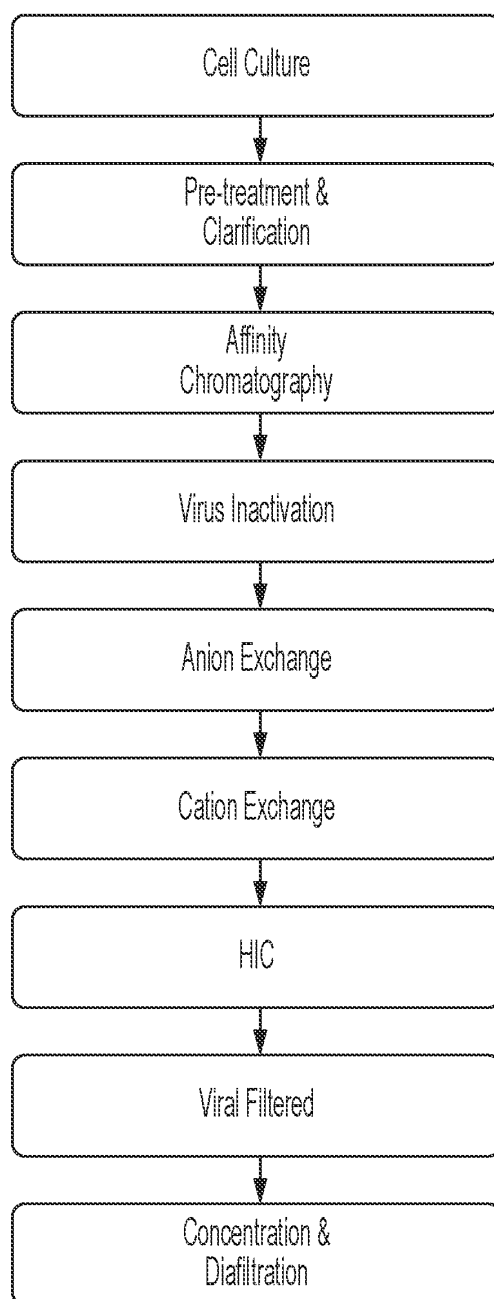
FIG. 30

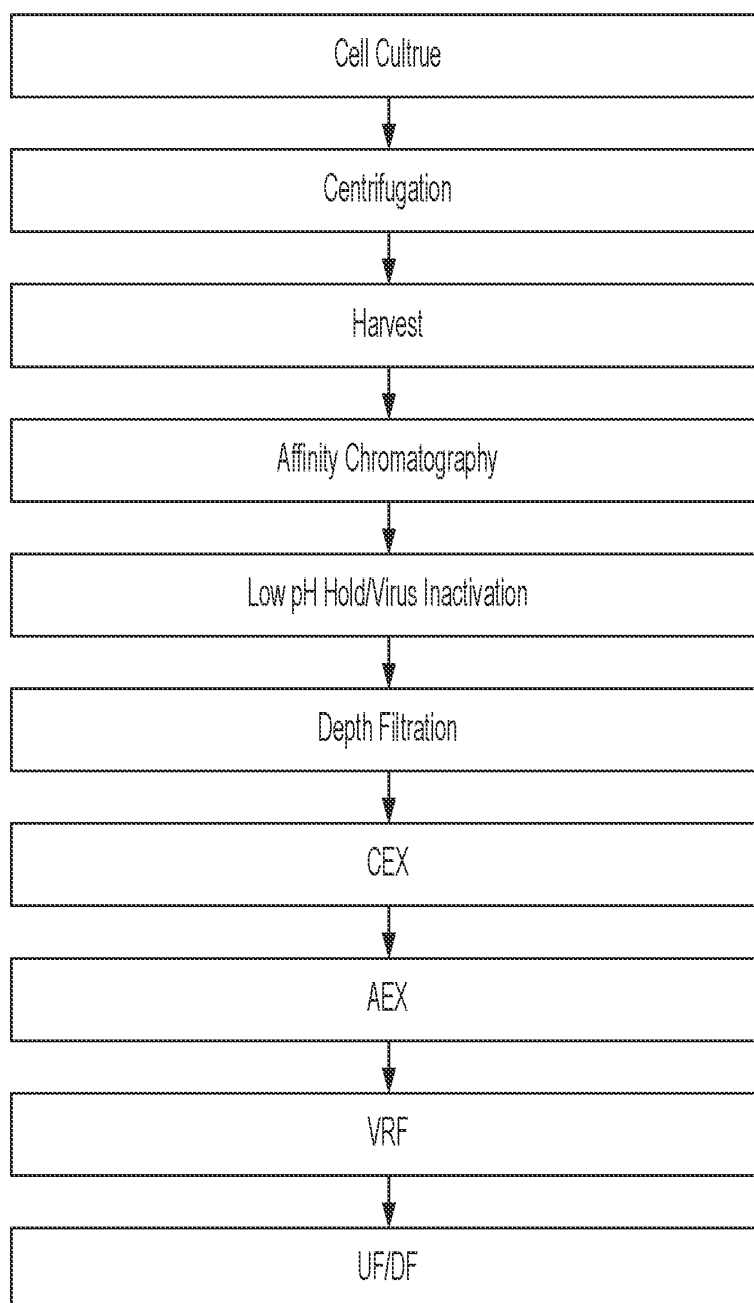
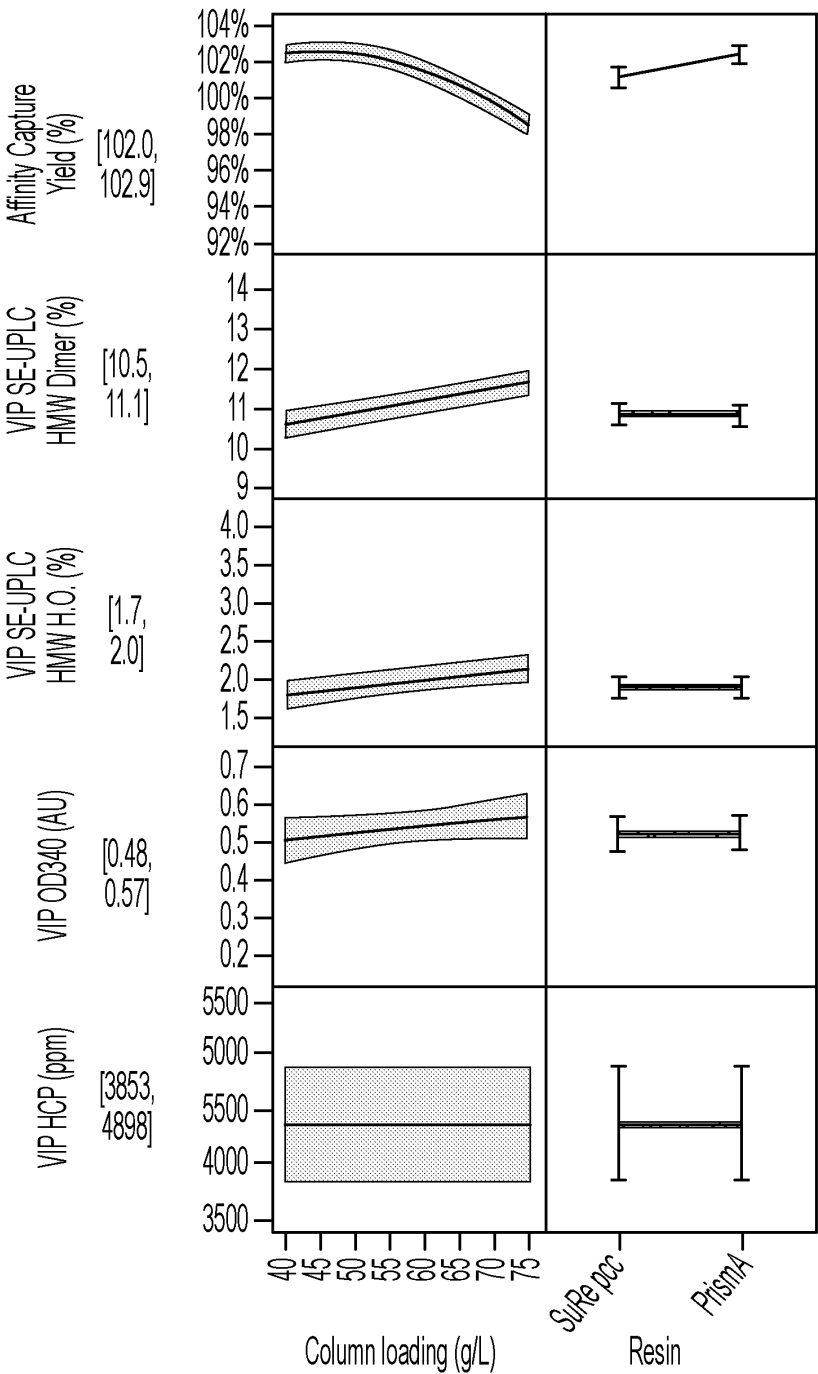
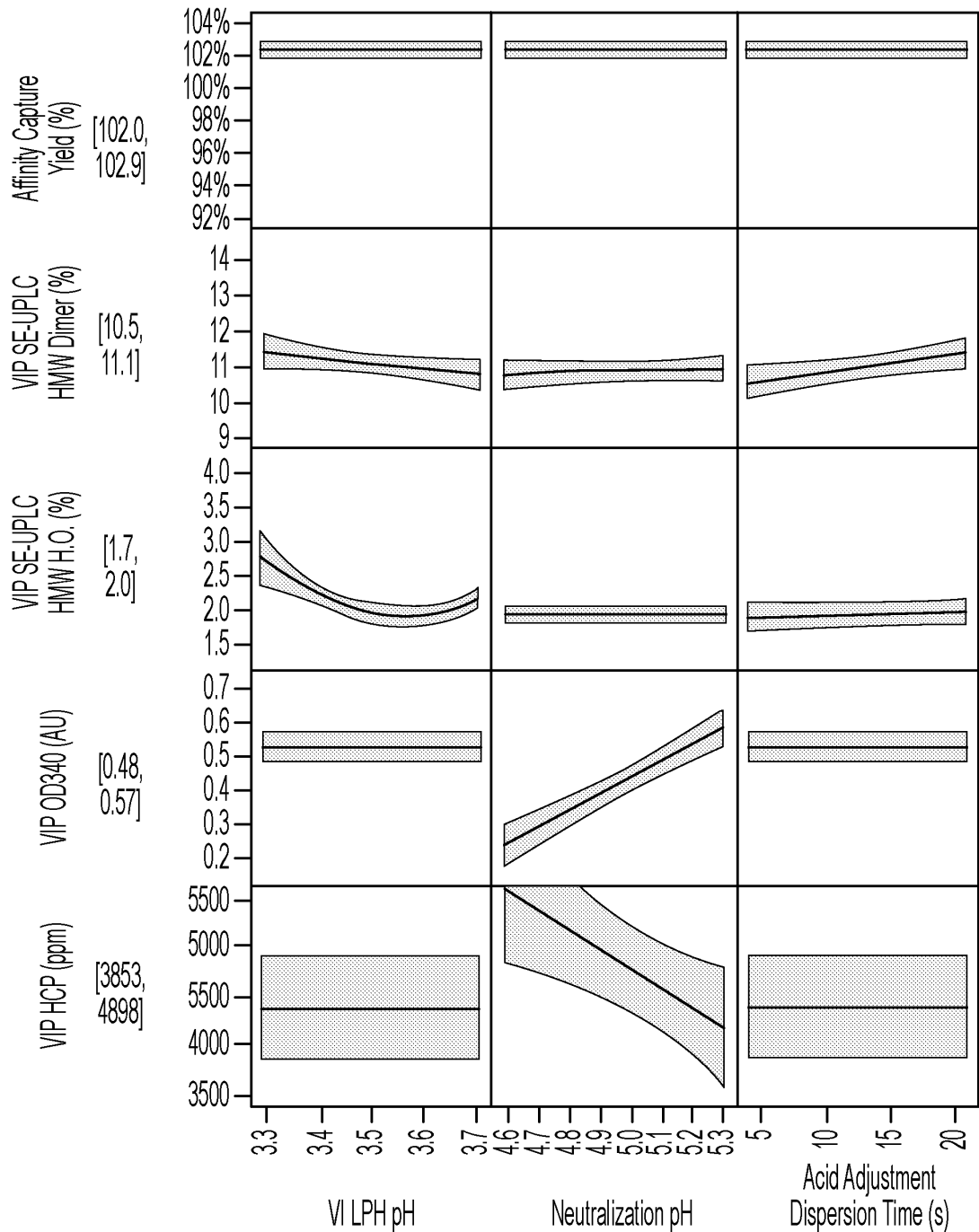
FIG. 31

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

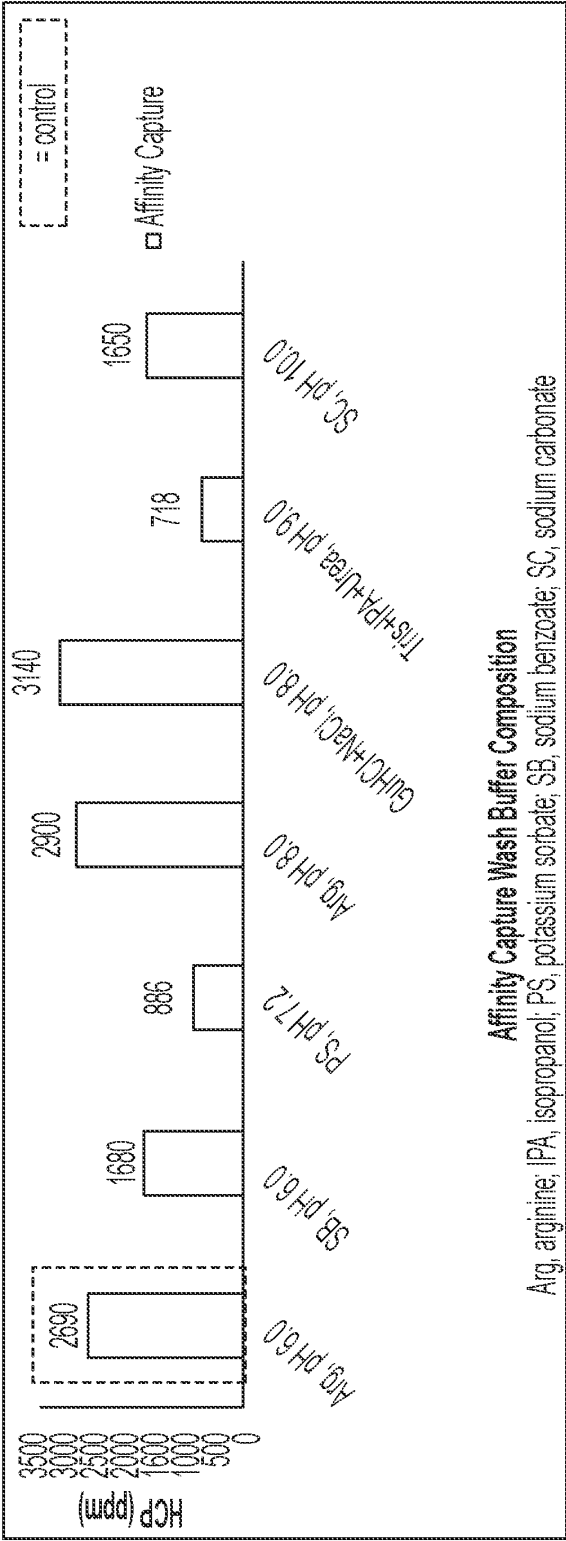


FIG. 34

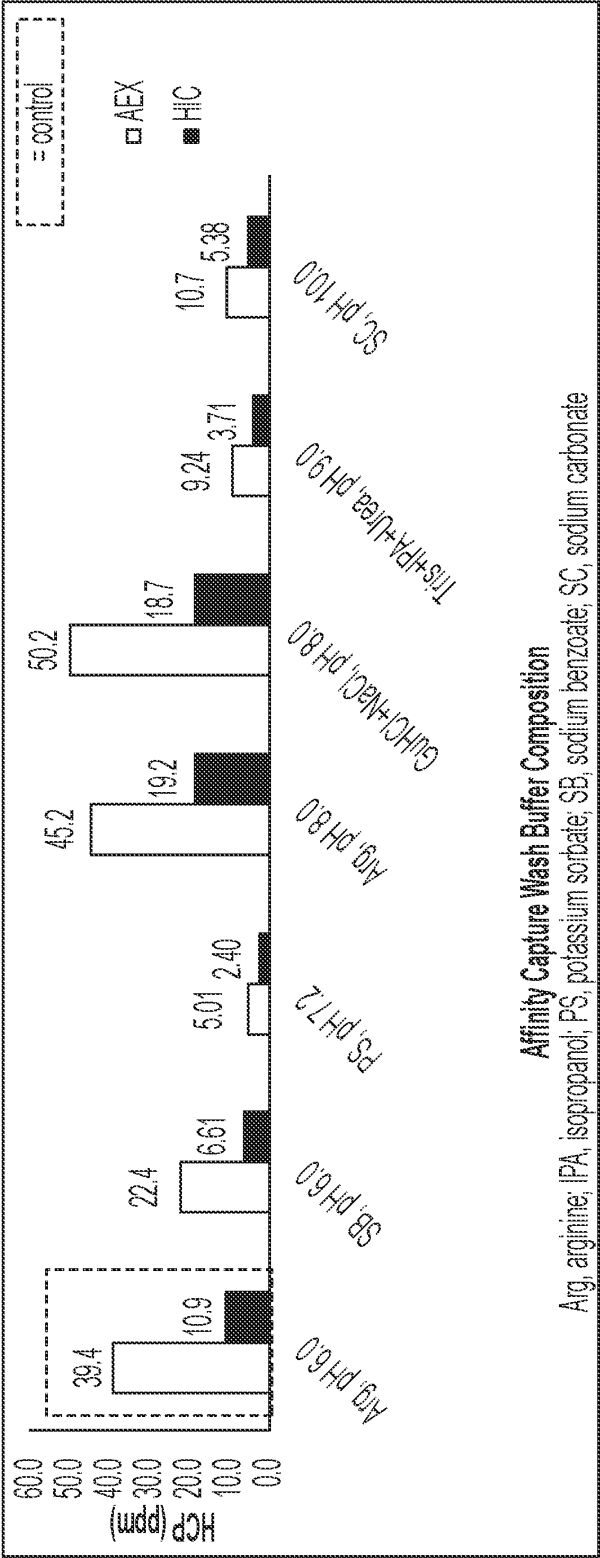
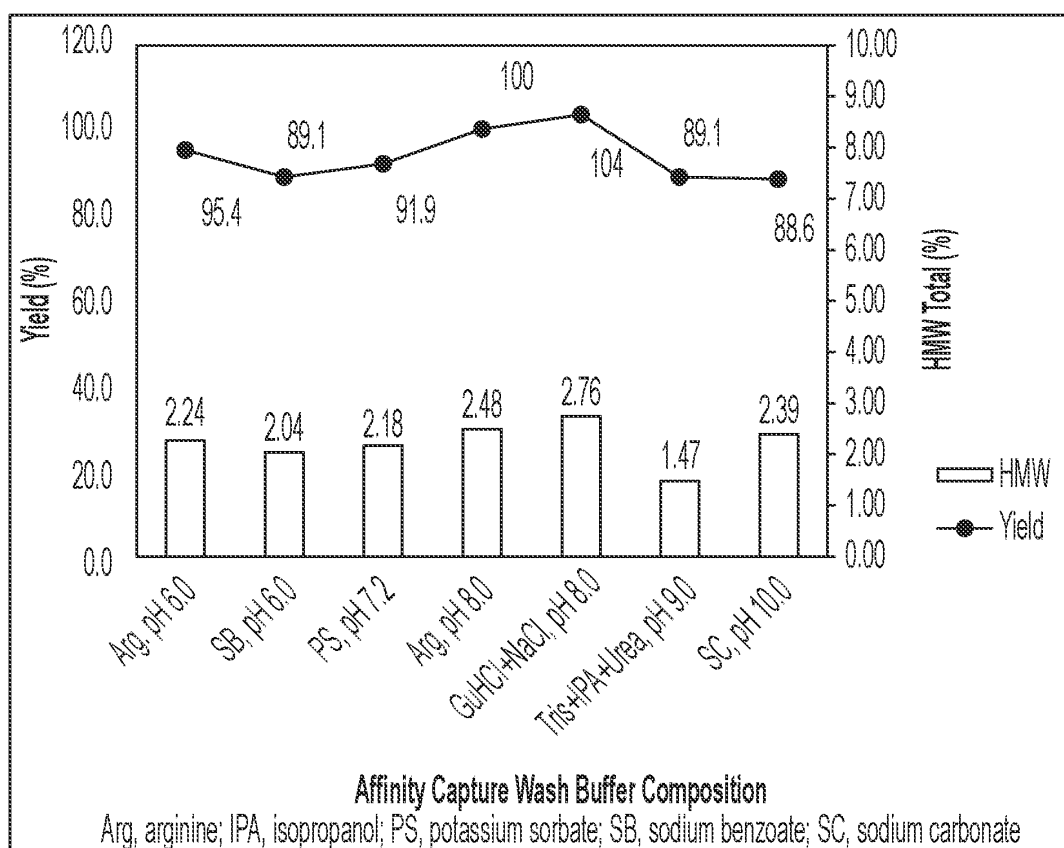
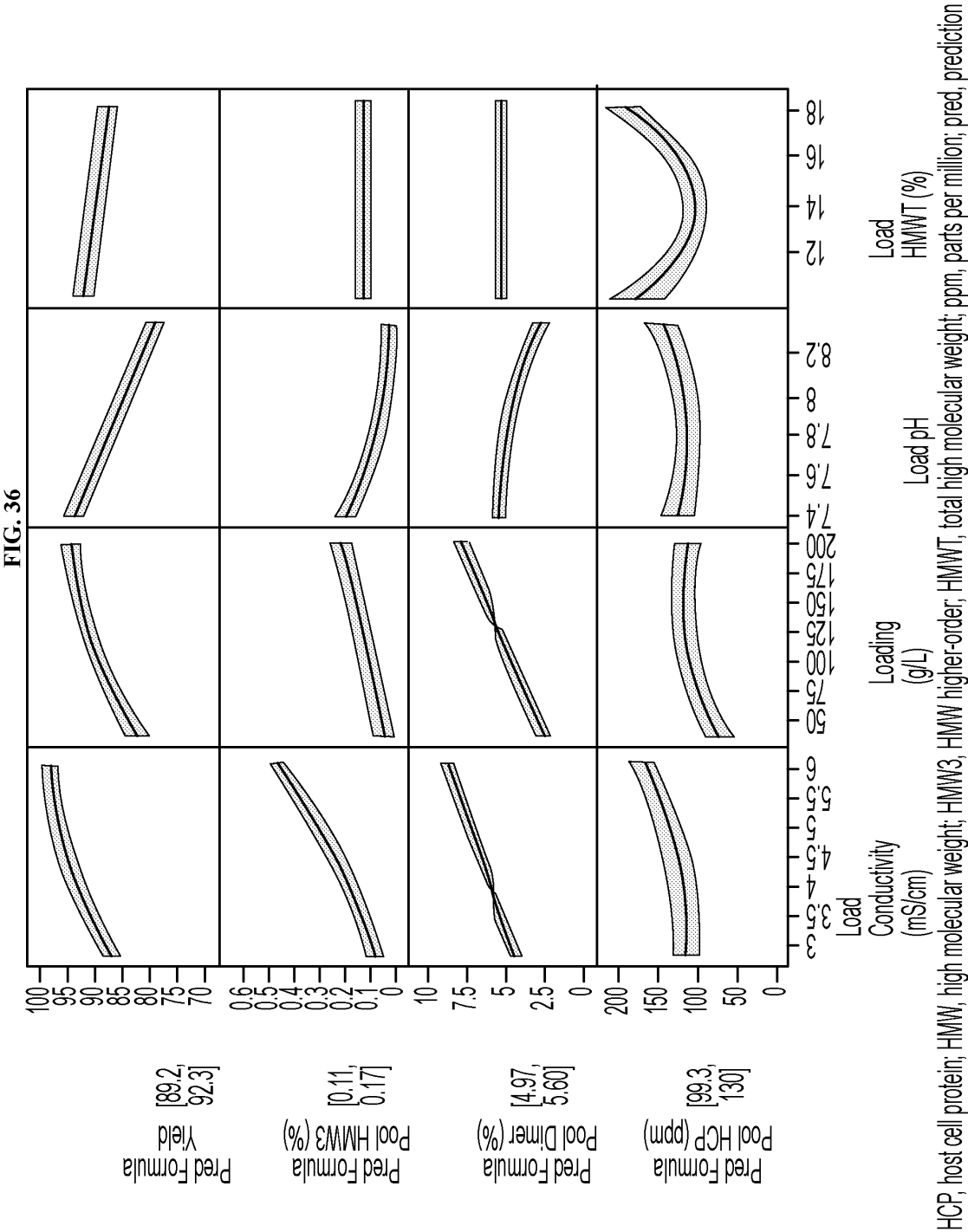


FIG. 35





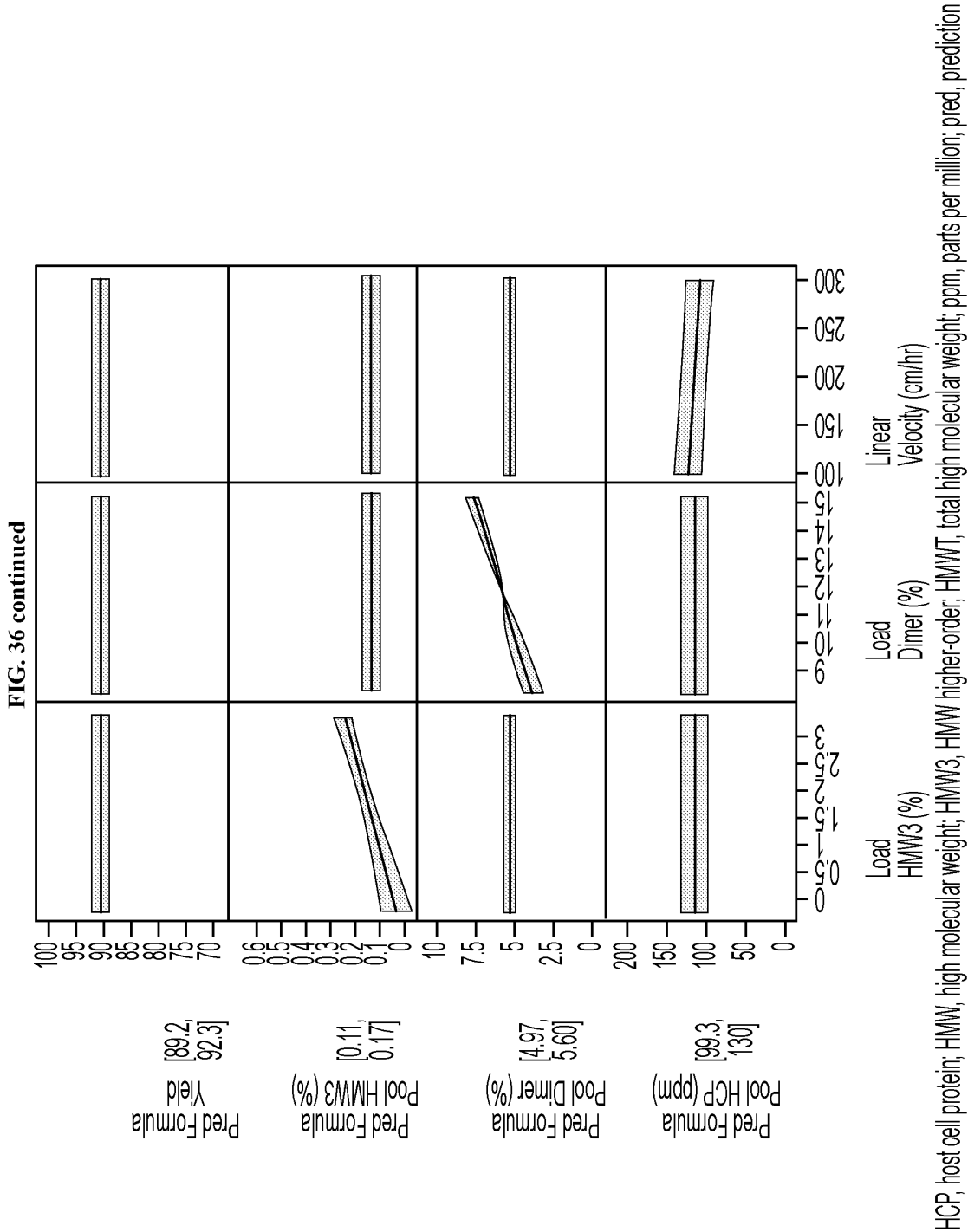
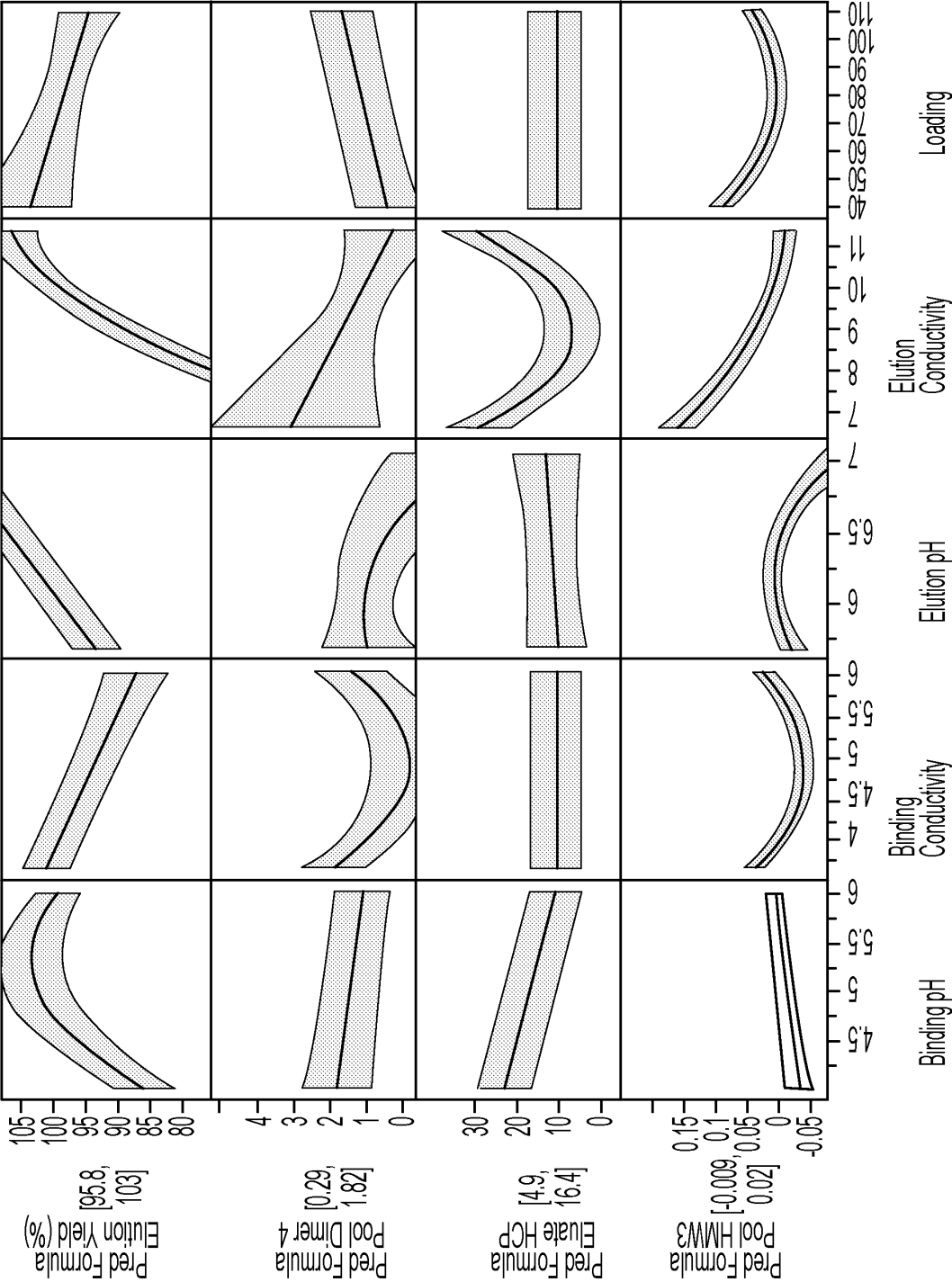


FIG. 37



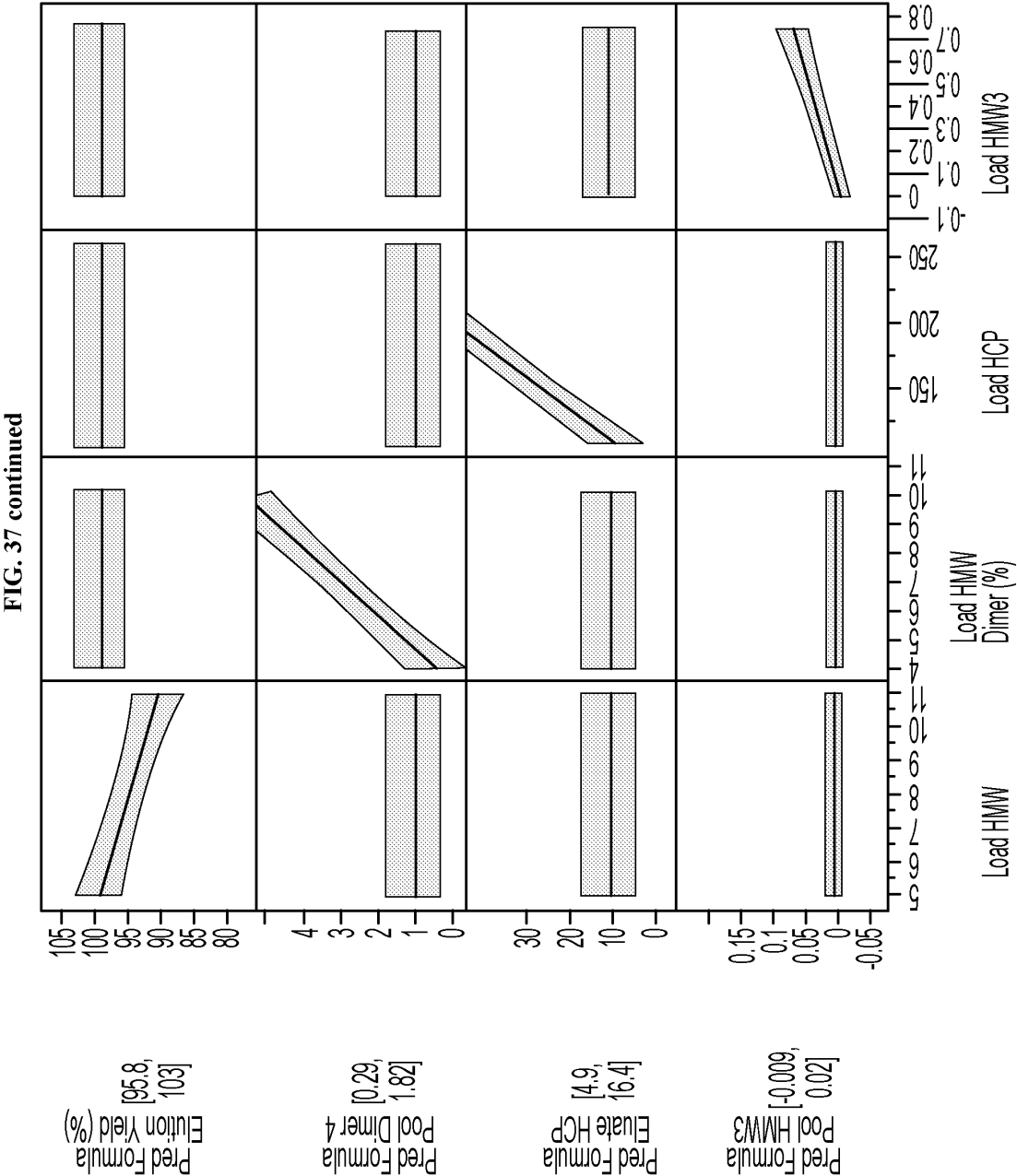
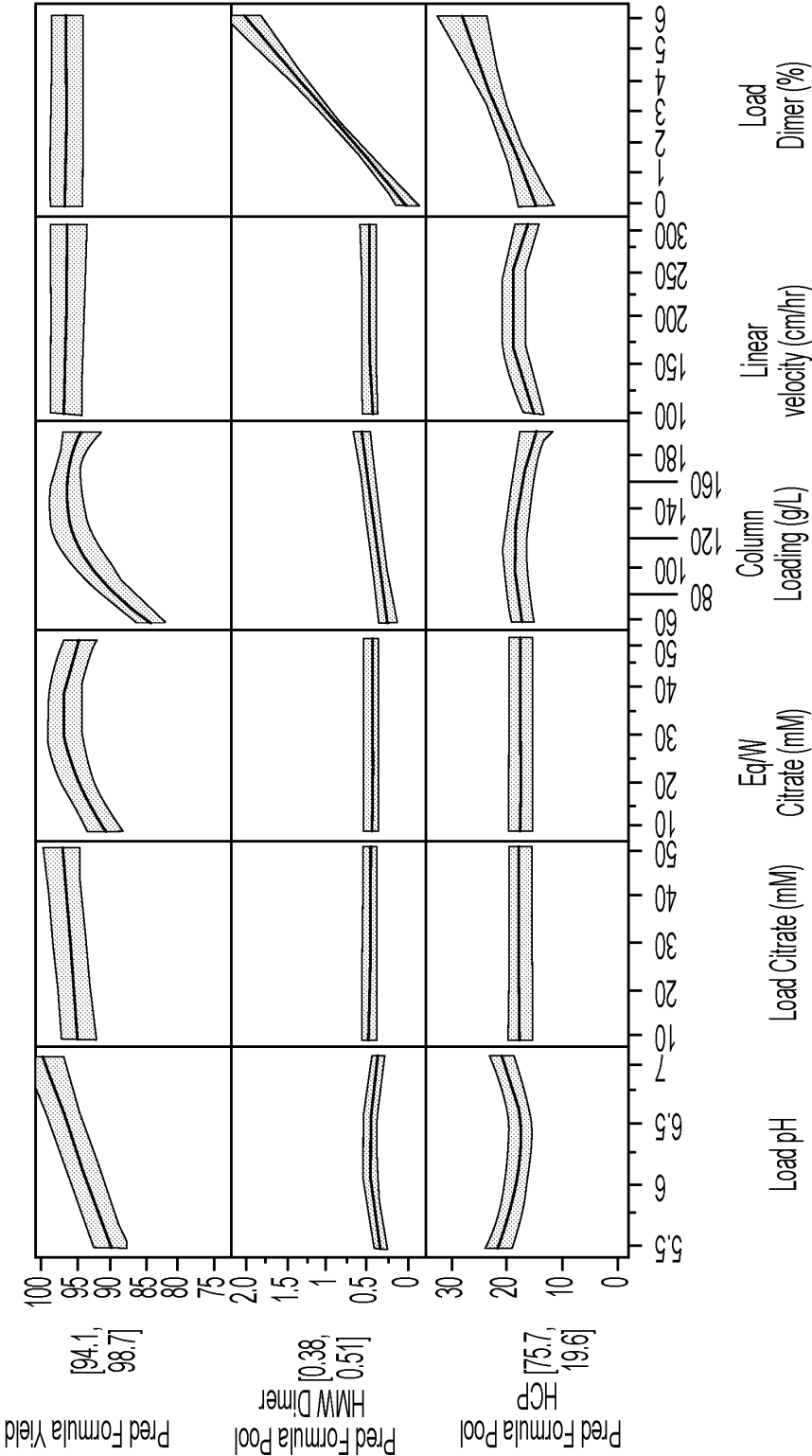


FIG. 38



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

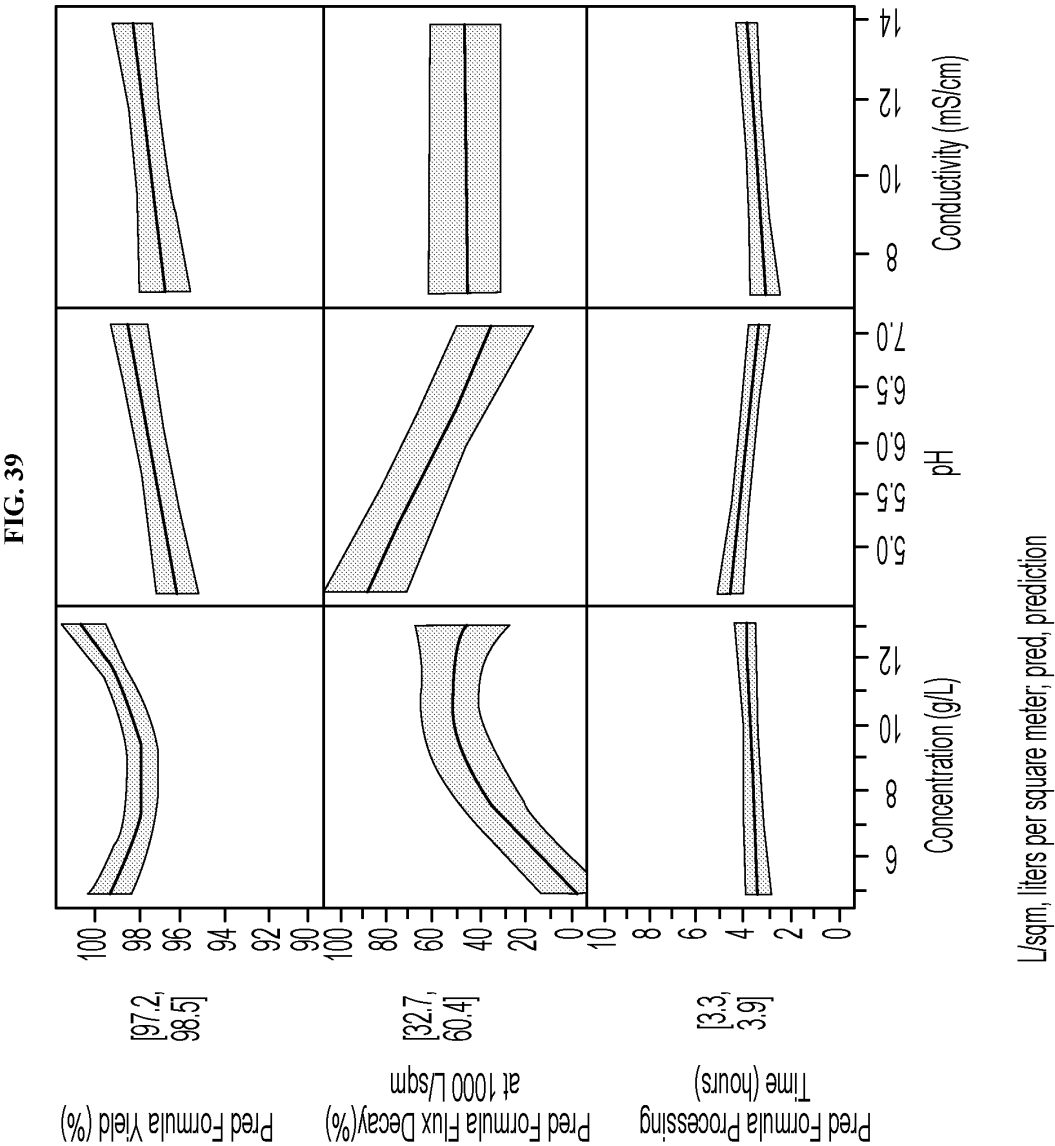


FIG. 40

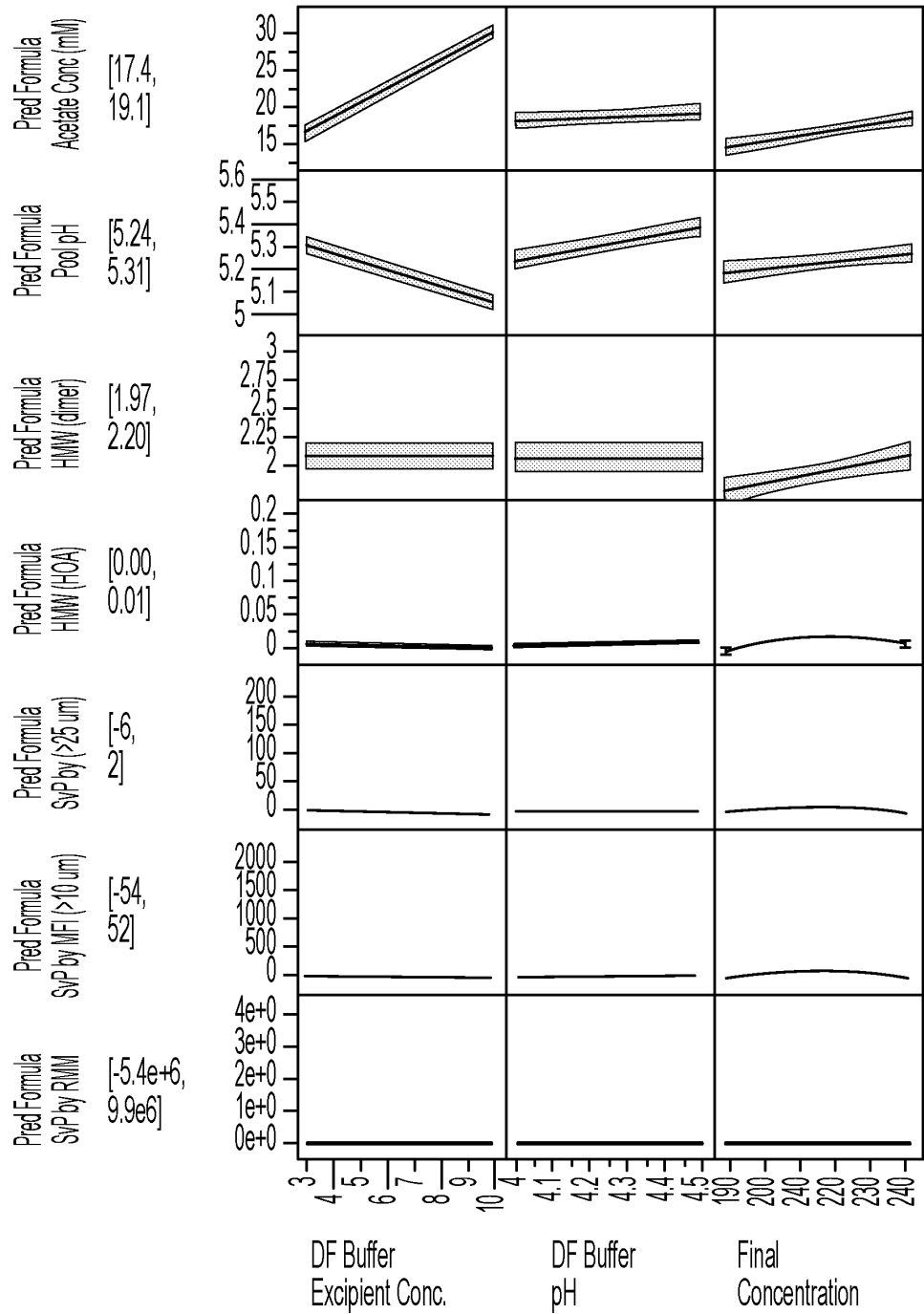


FIG. 40 continued

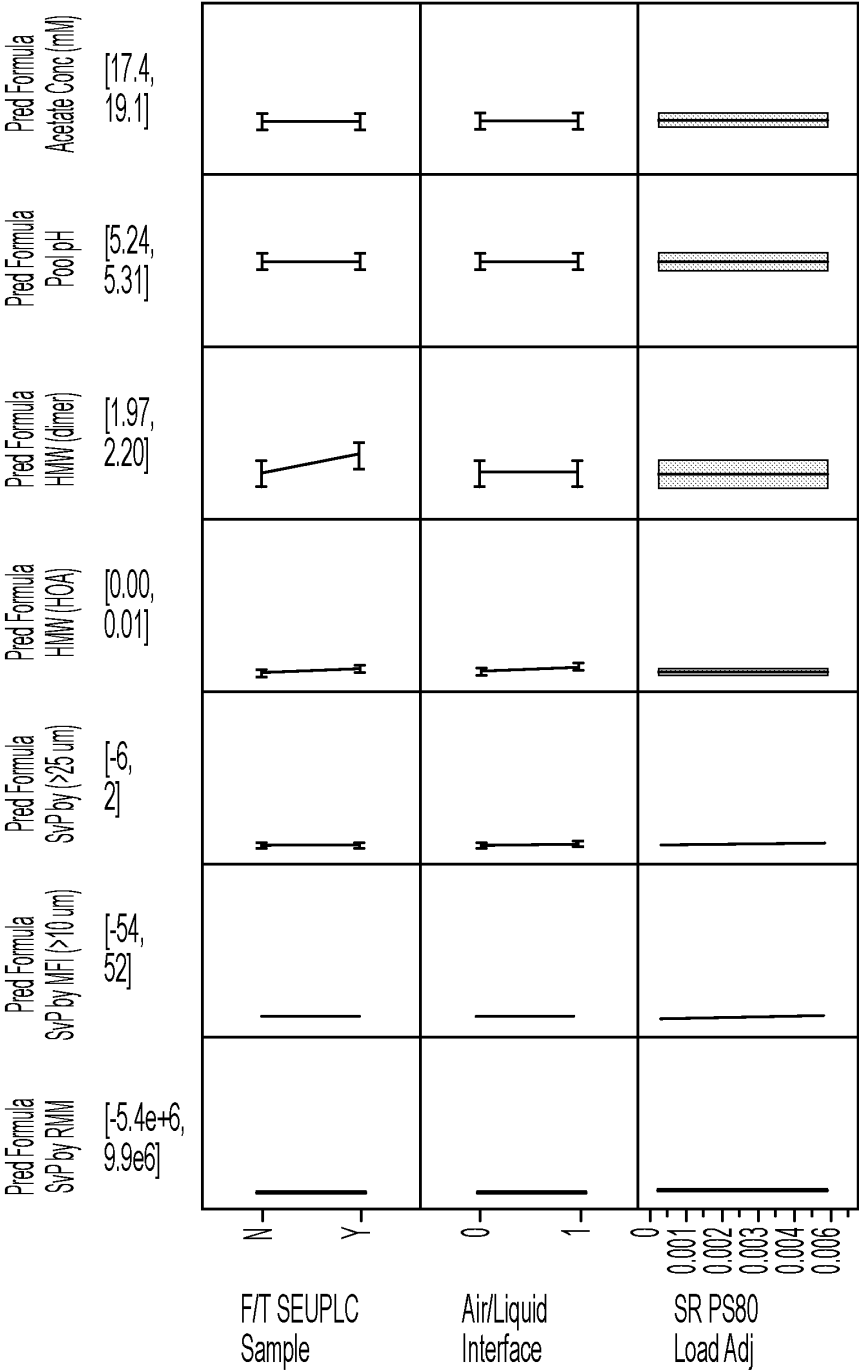


FIG. 41

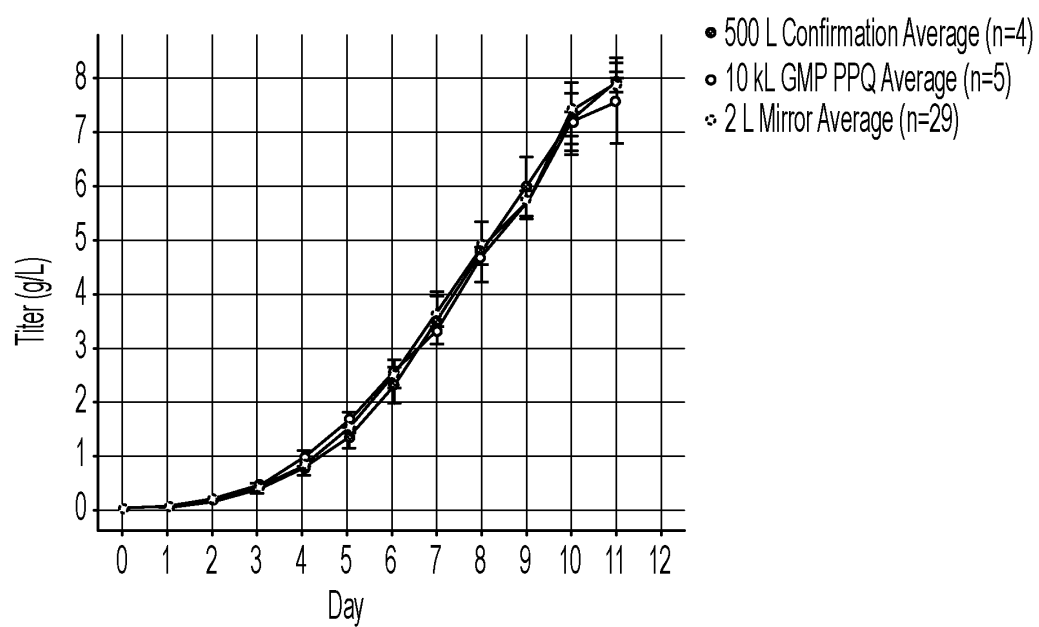


FIG. 42

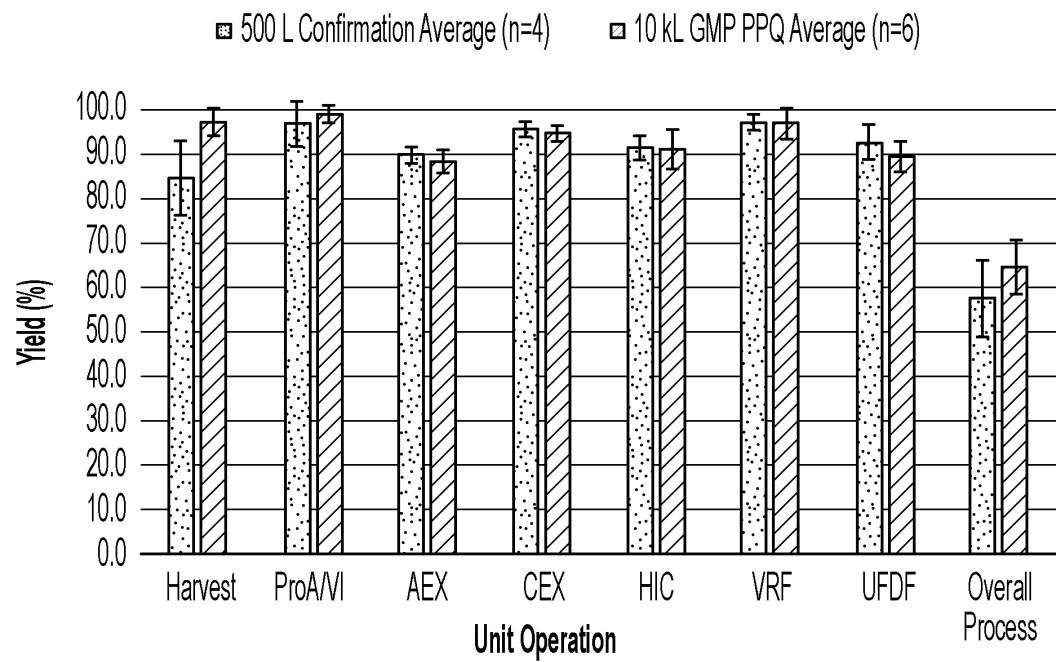


FIG. 43

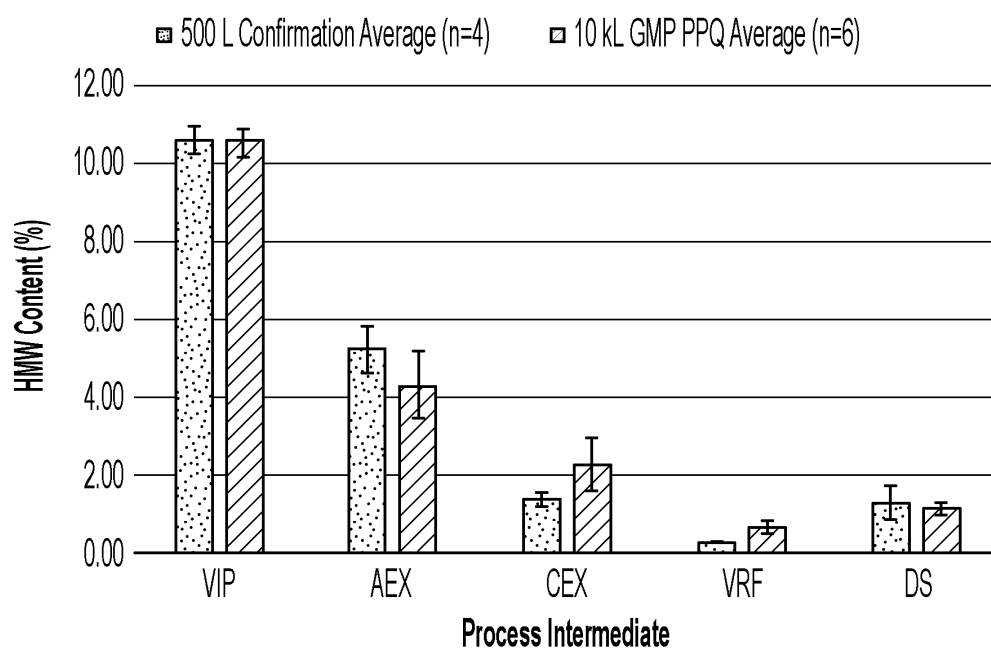


FIG. 44

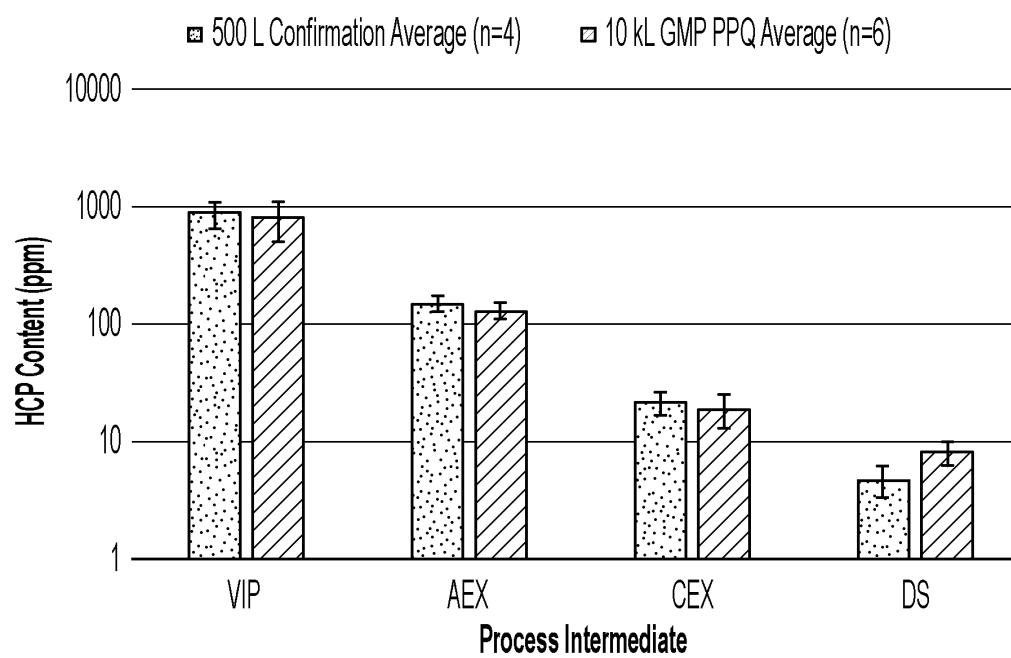


FIG. 45

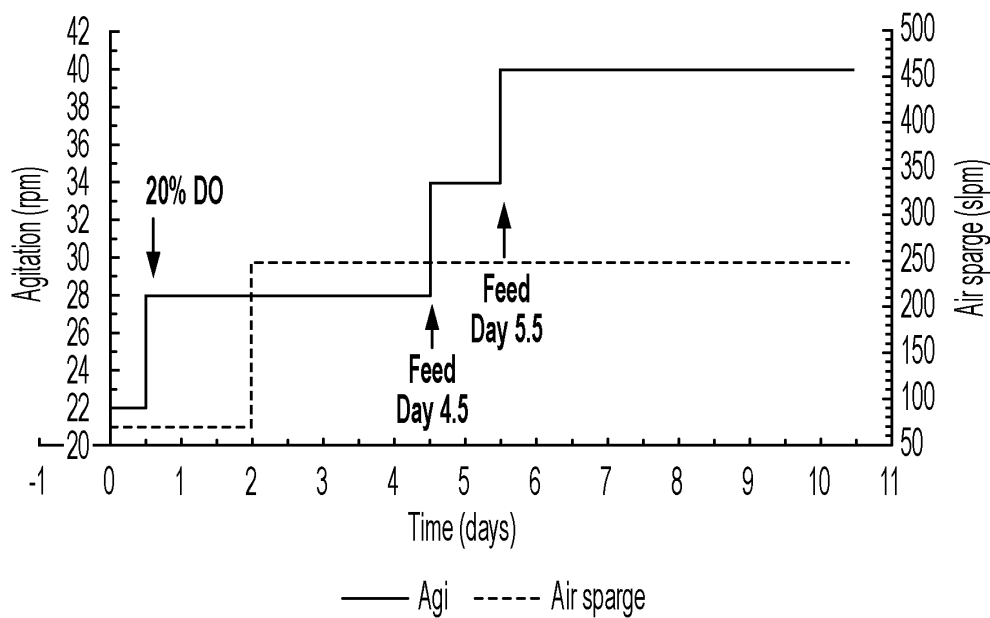


FIG. 46

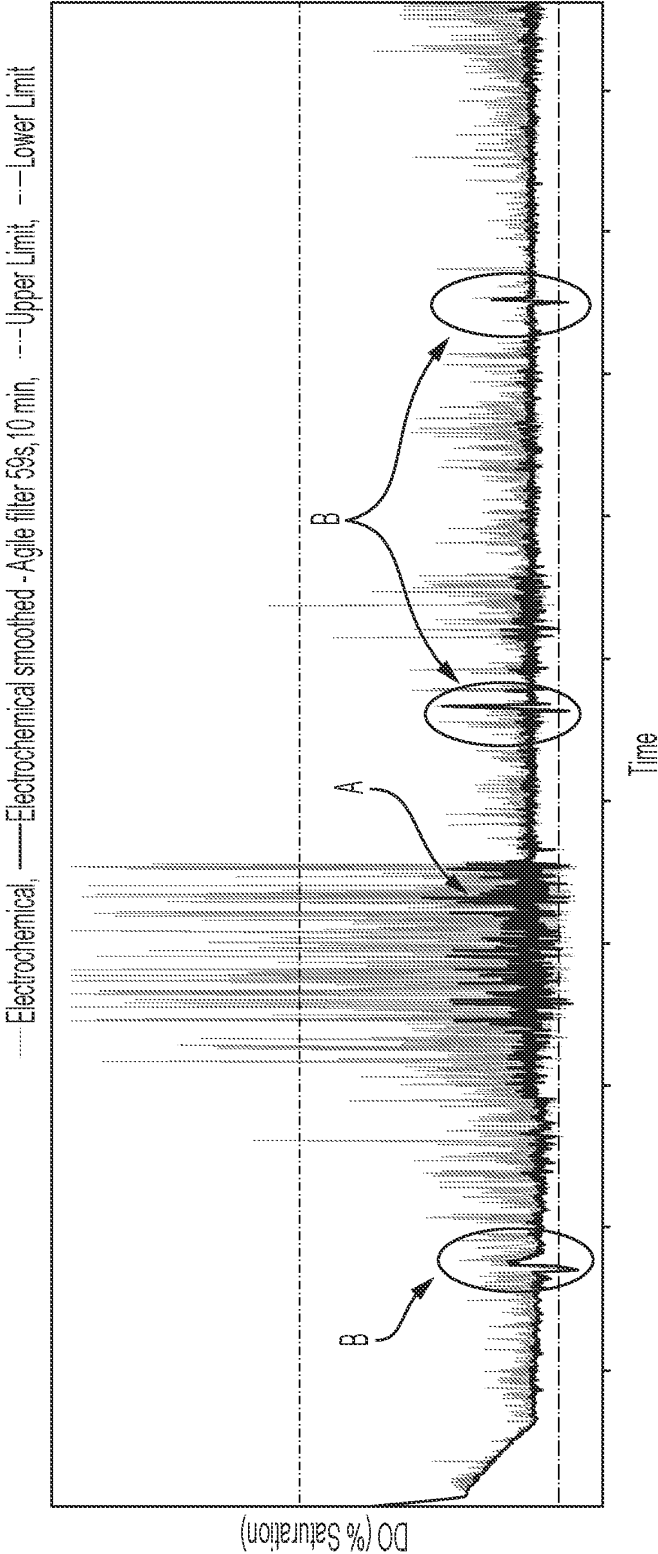


FIG. 47

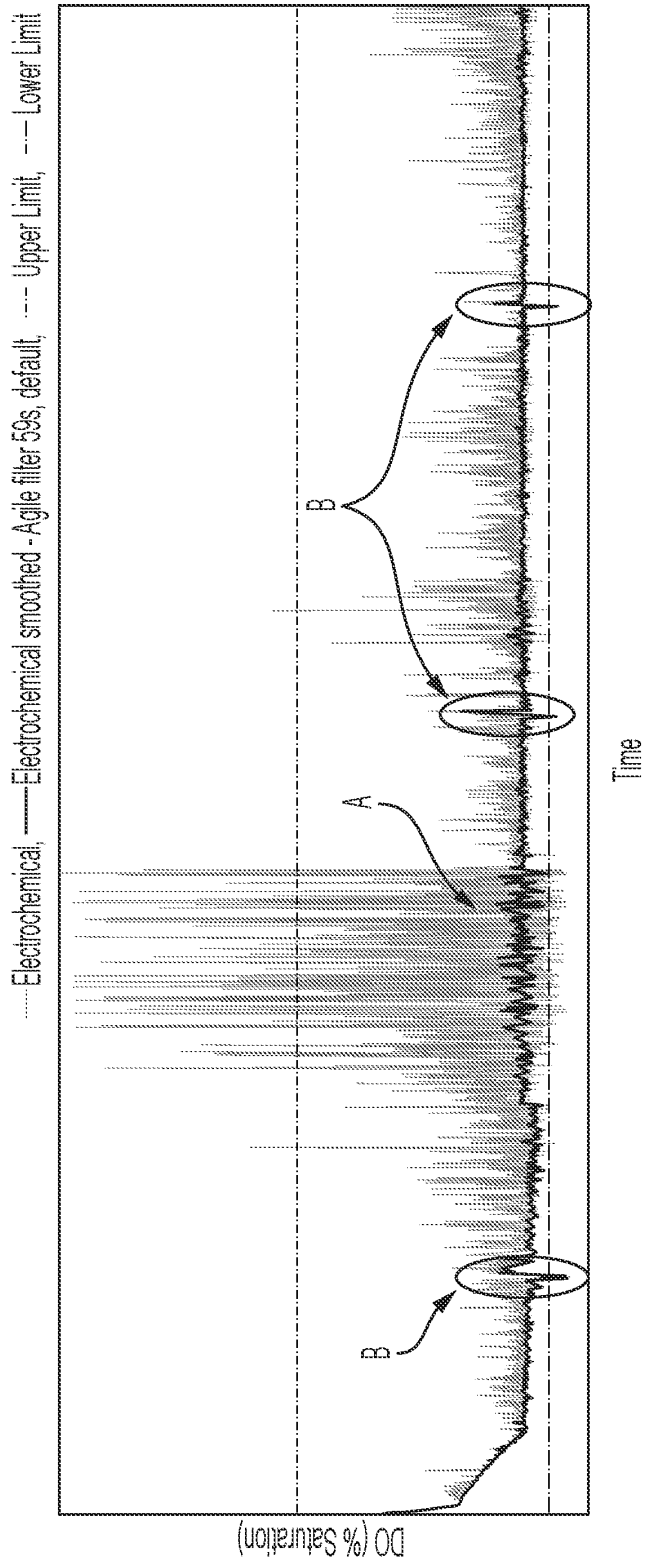


FIG. 48

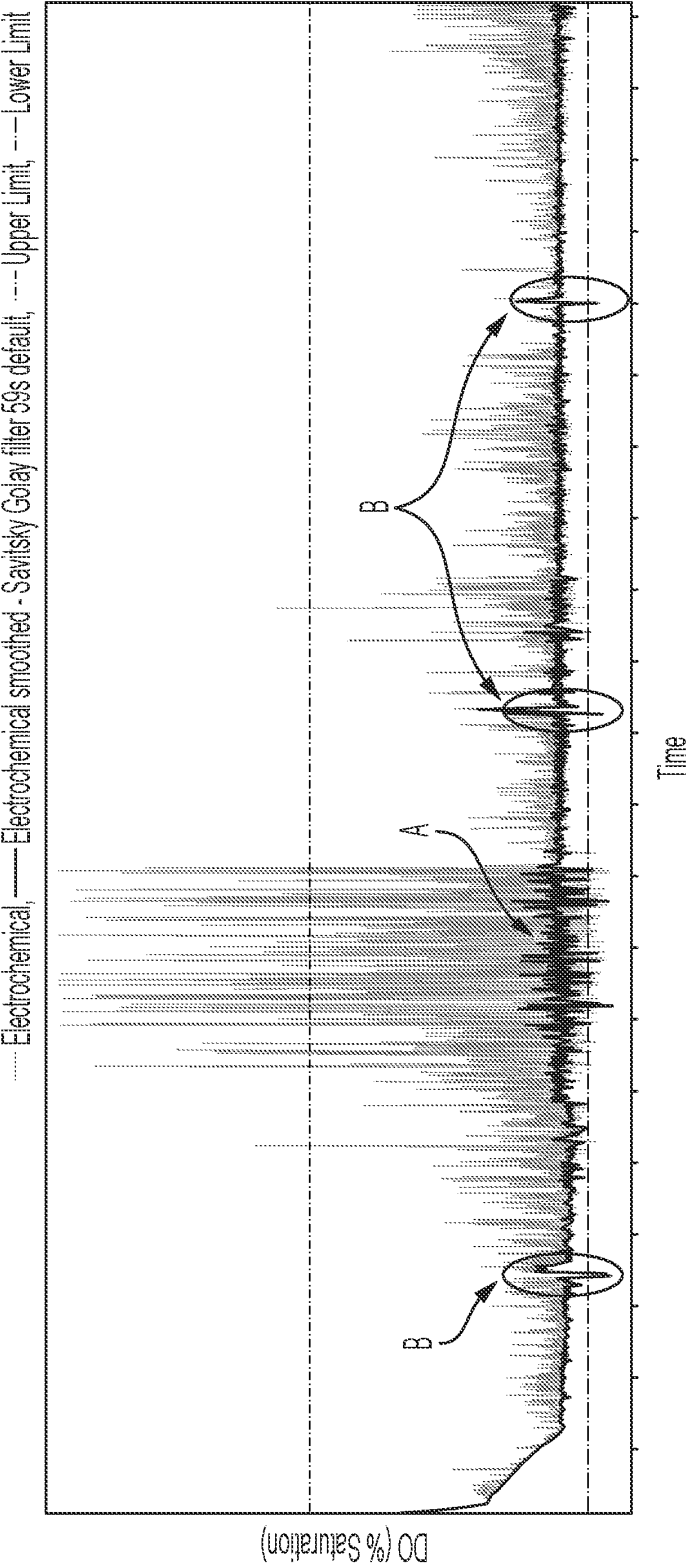


FIG. 49

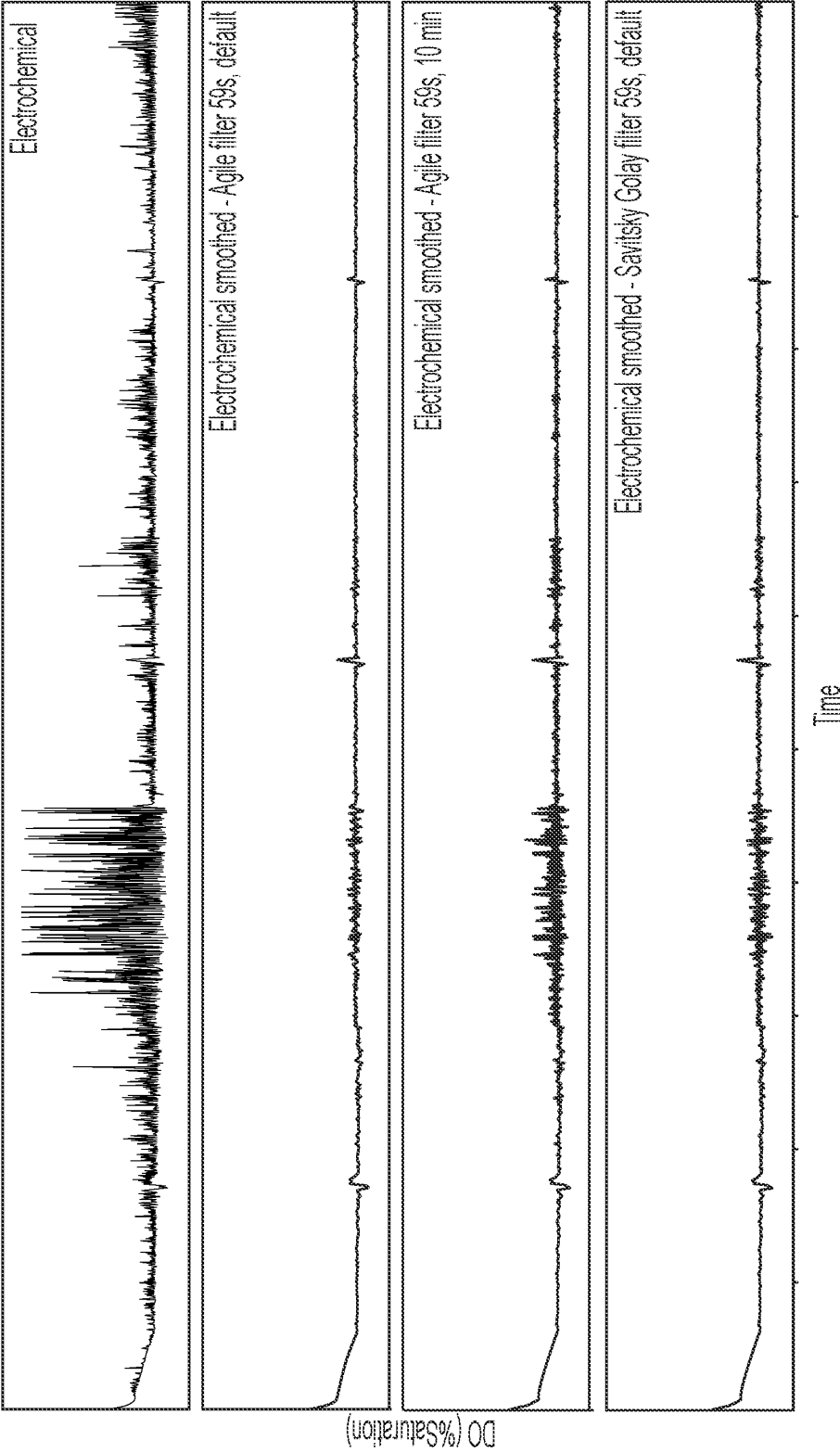


FIG. 50

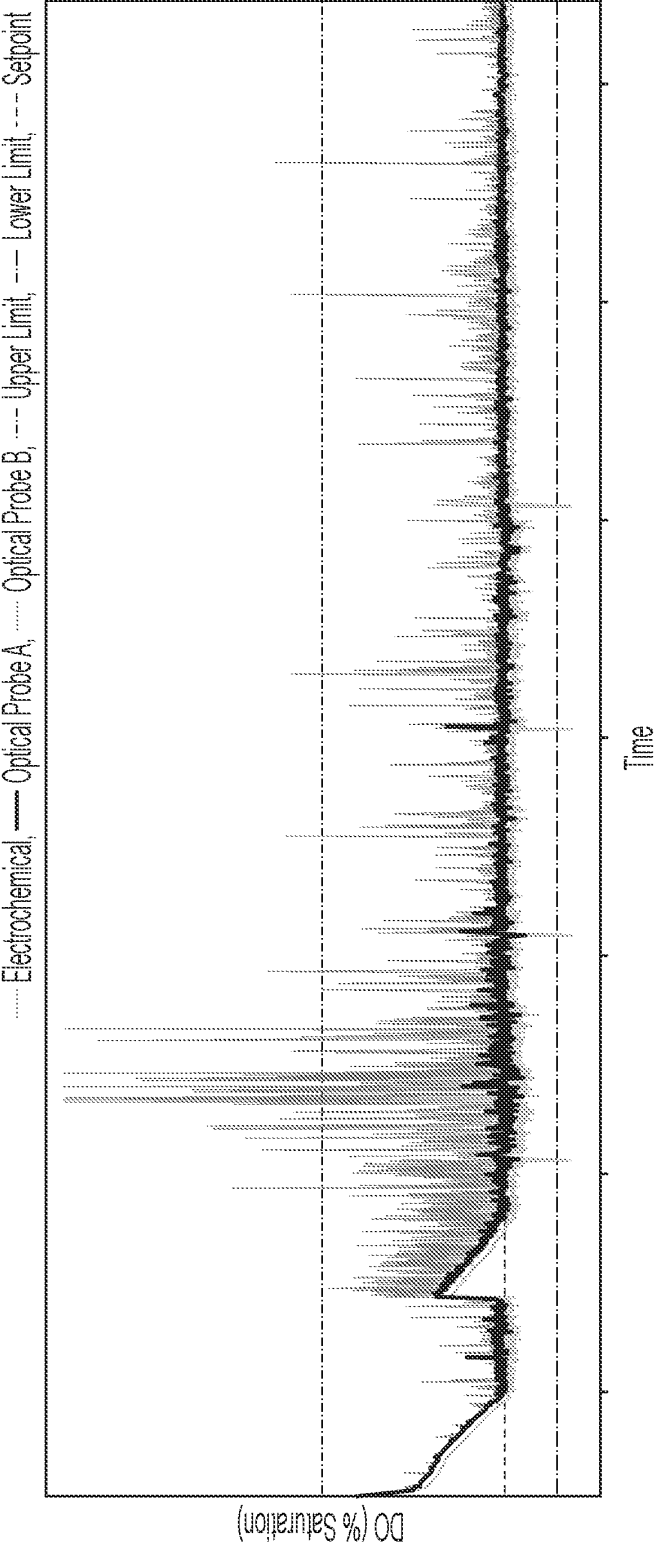


FIG. 51

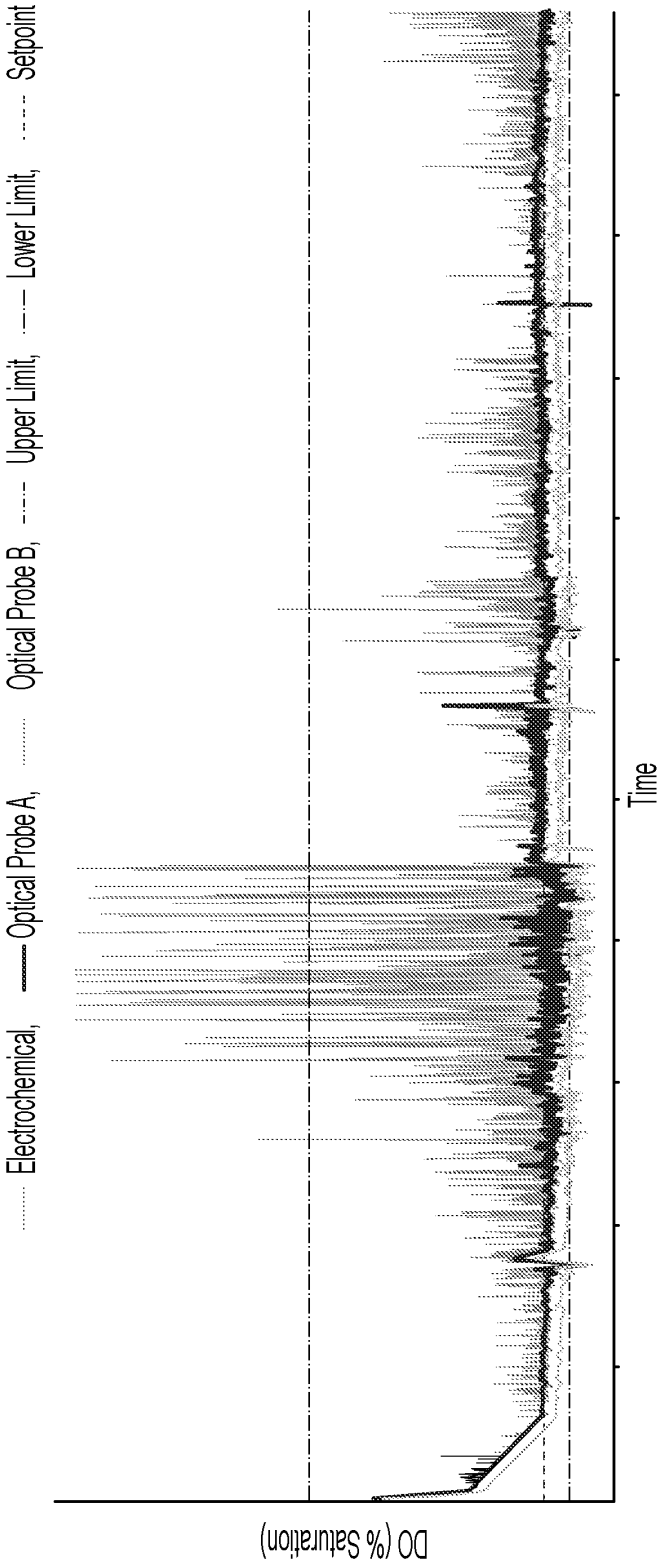


FIG. 52

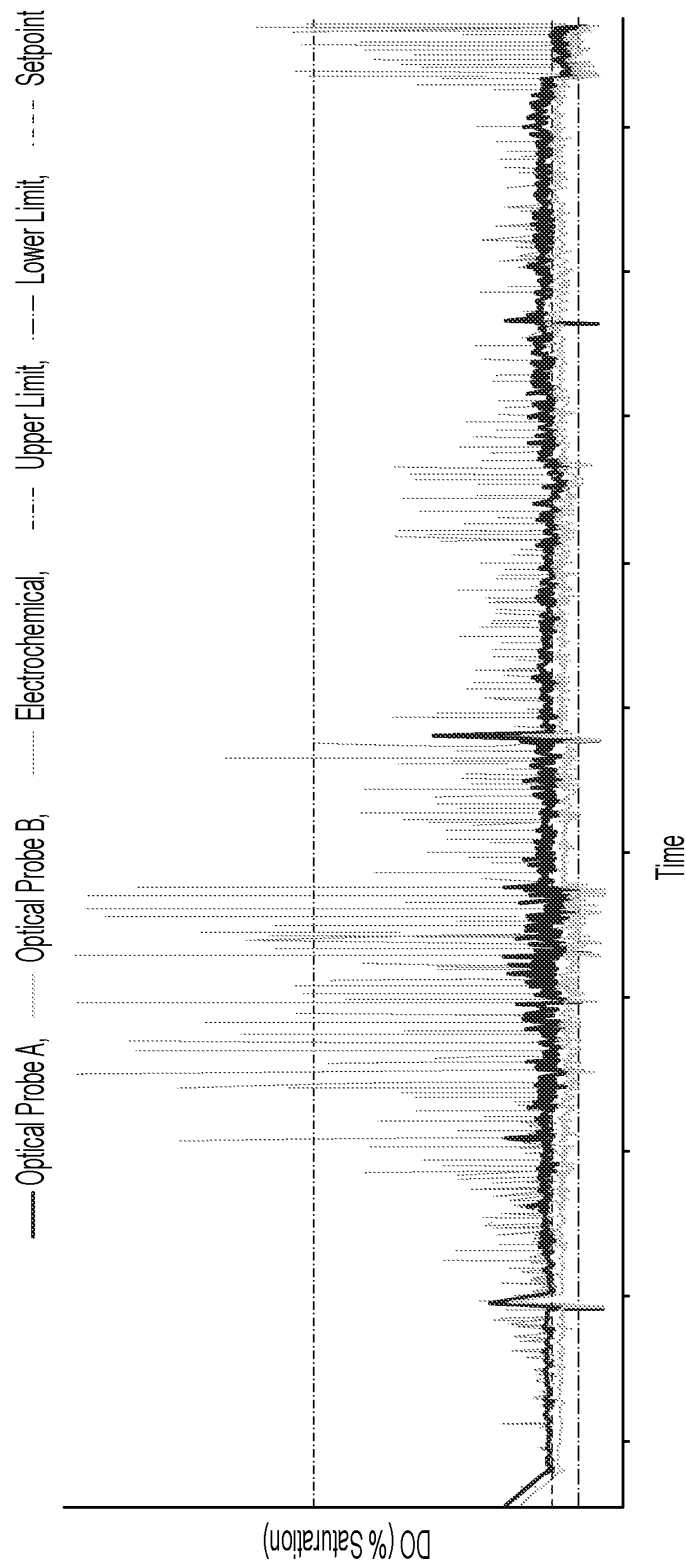


FIG. 53

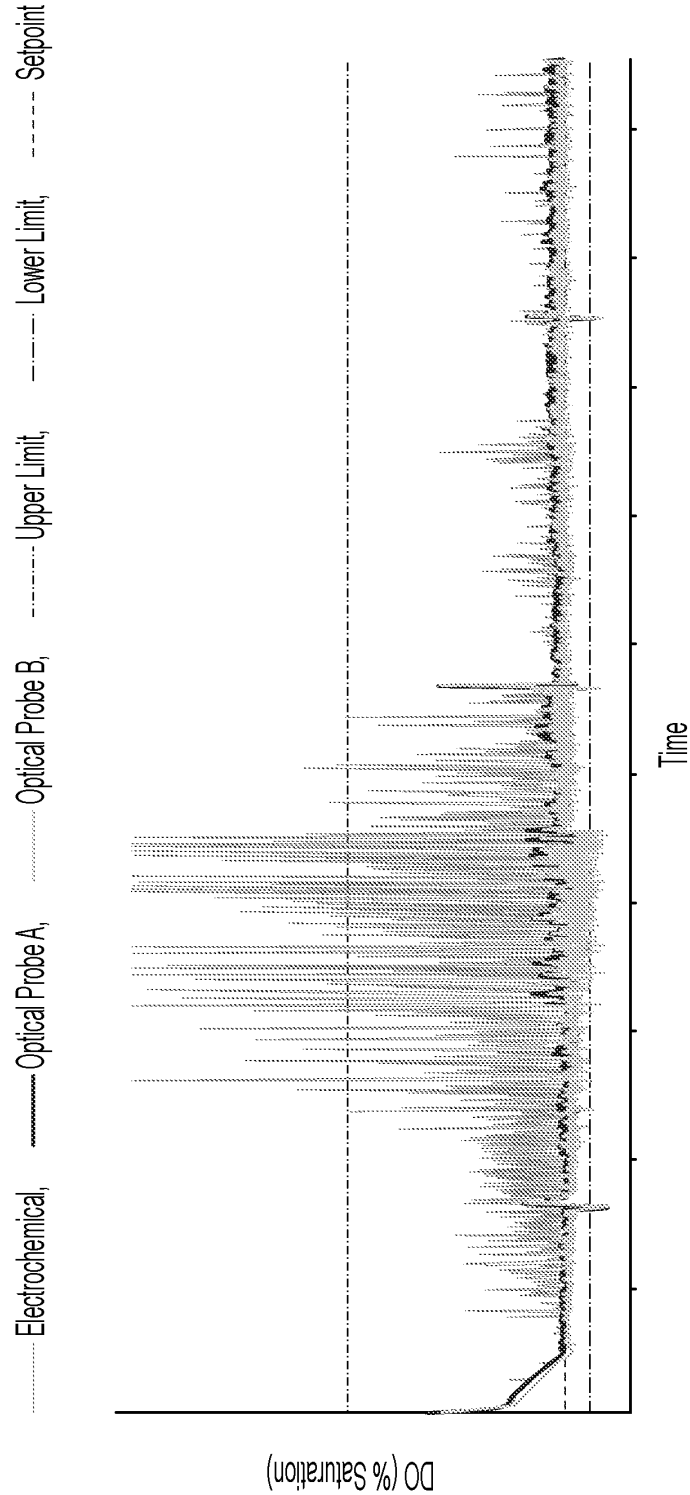


FIG. 54

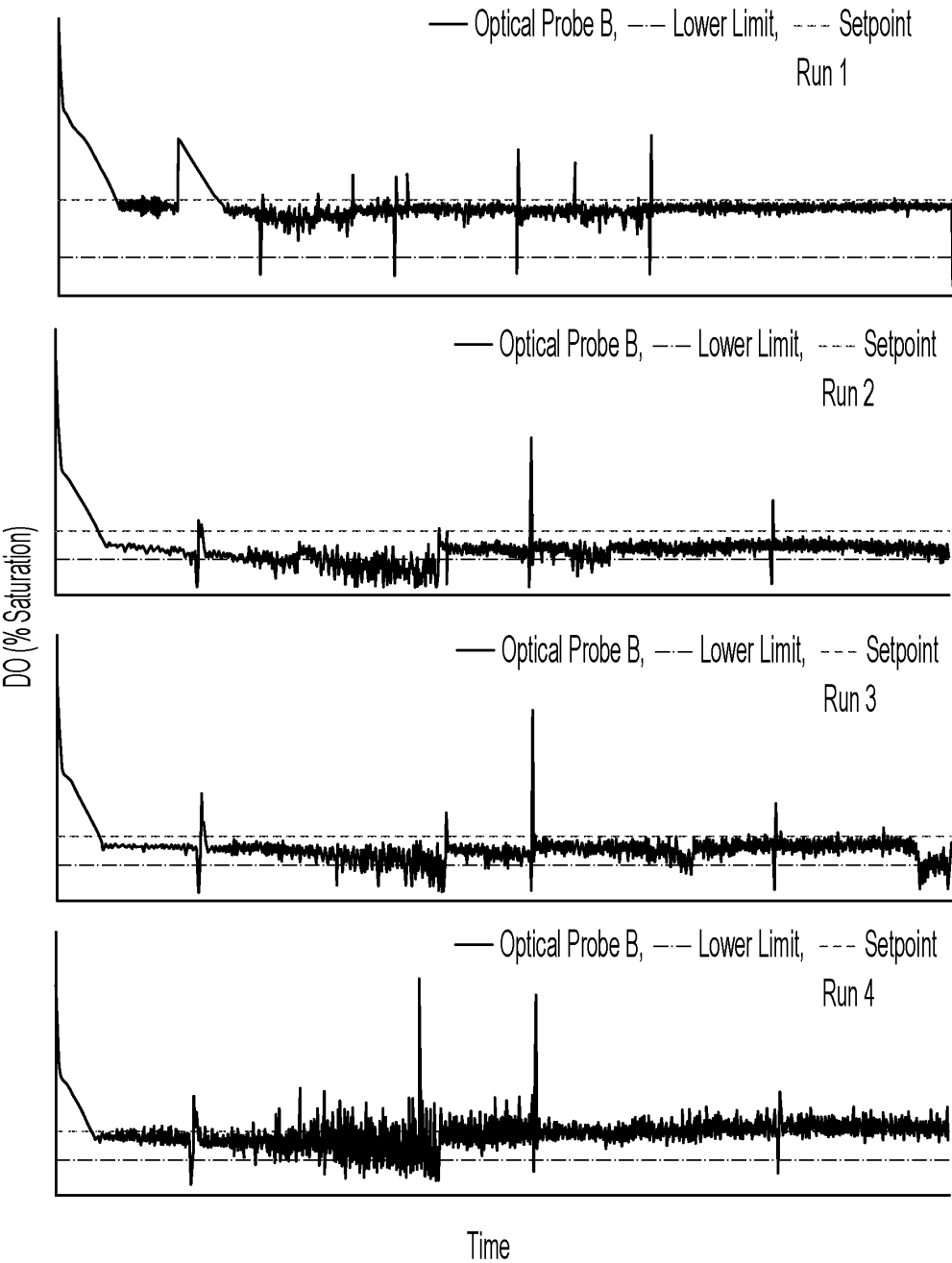


FIG. 55

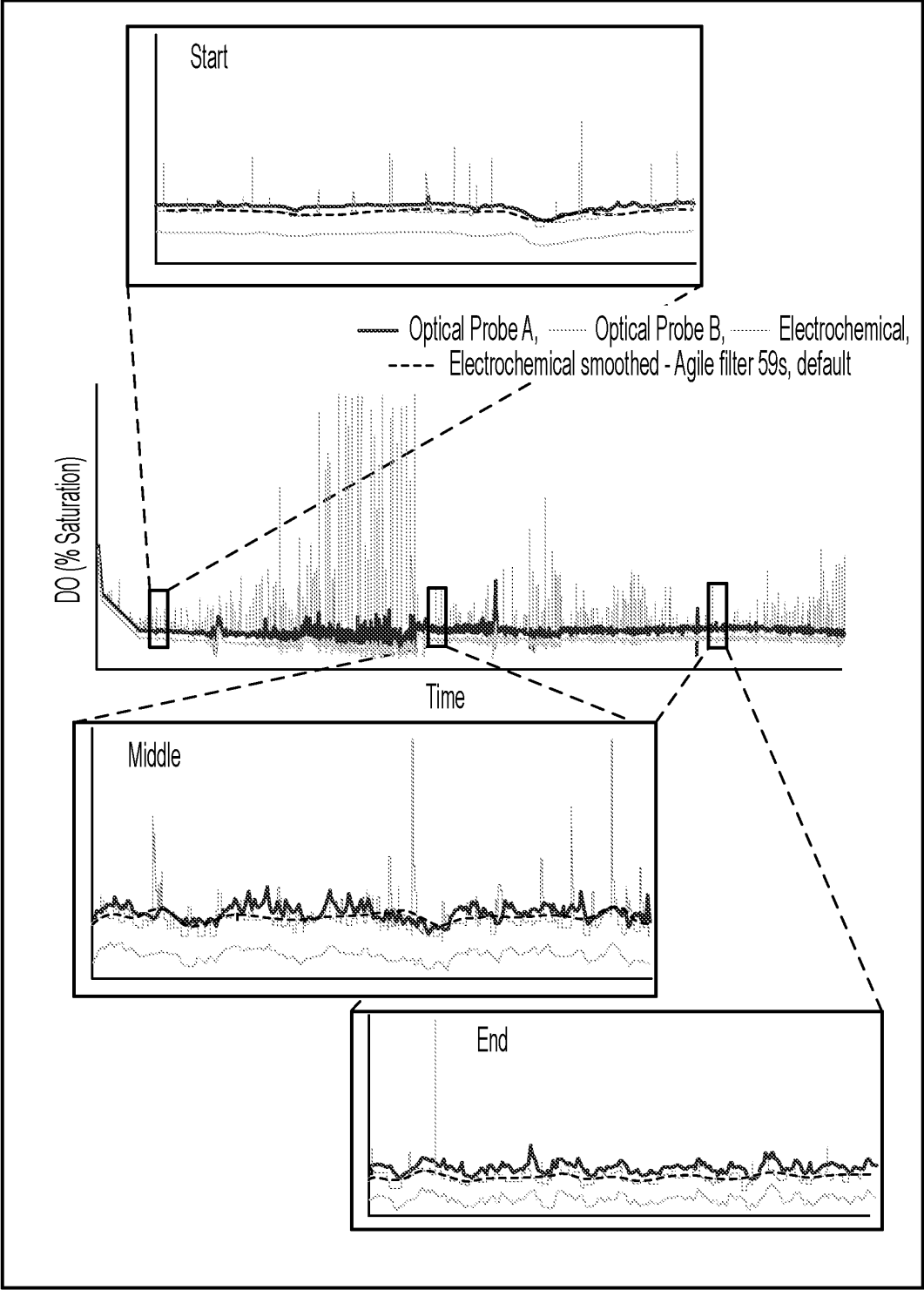


FIG. 56

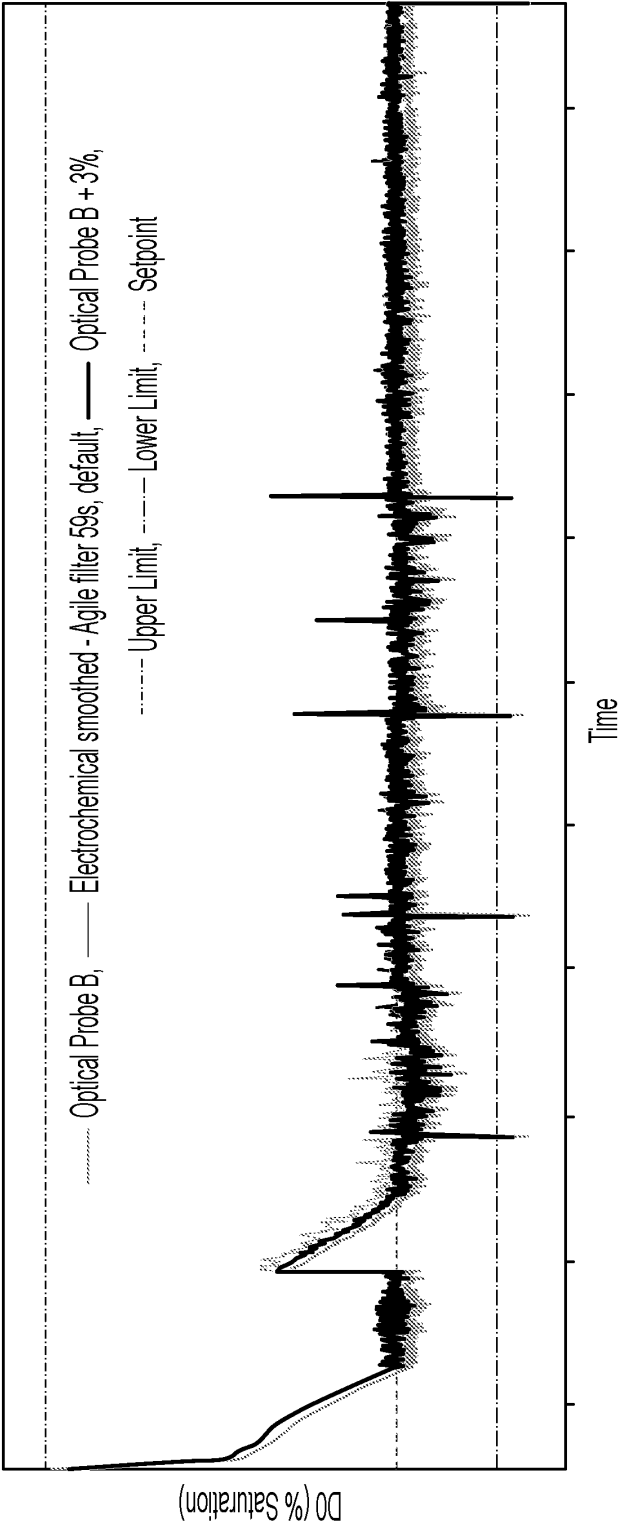


FIG. 57

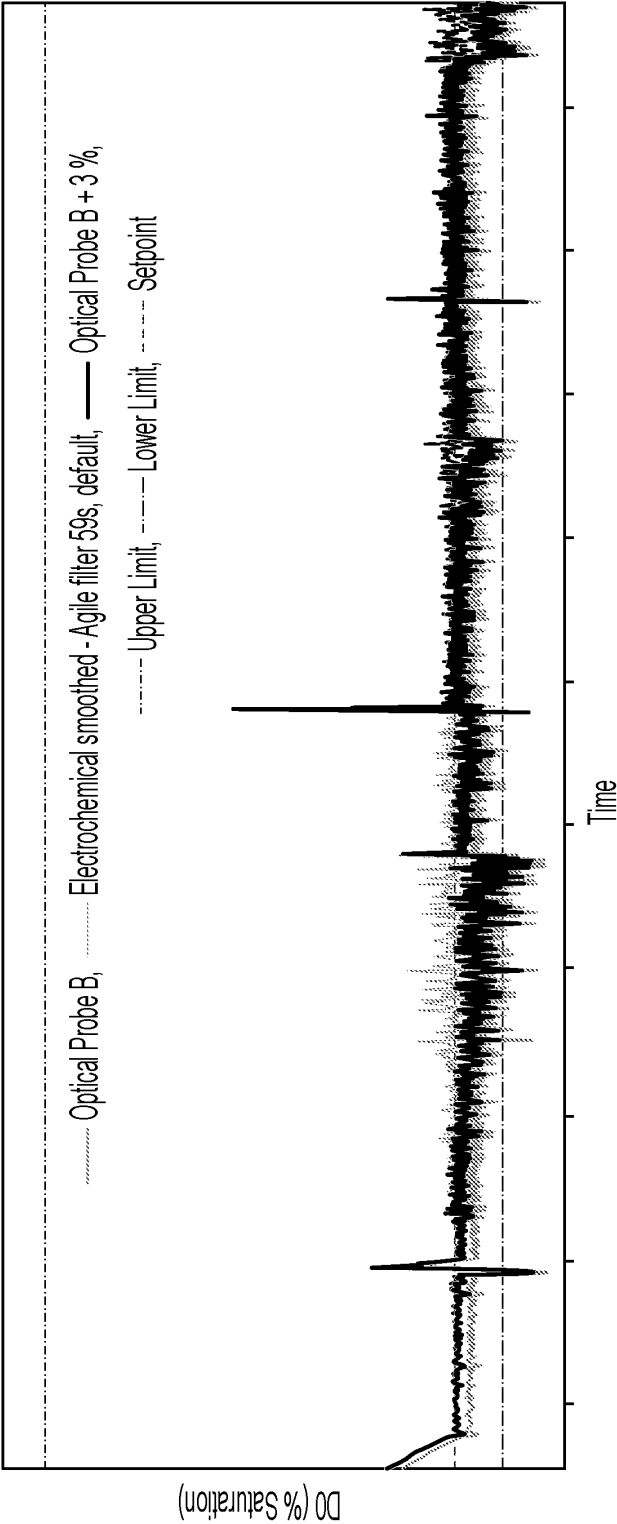


FIG. 58B

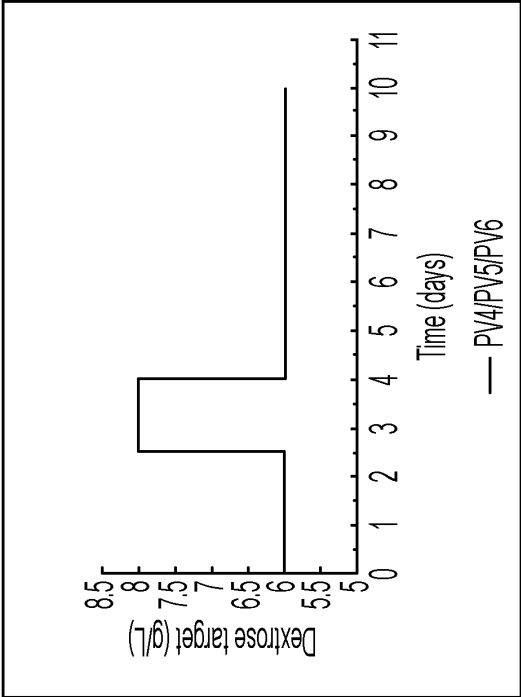
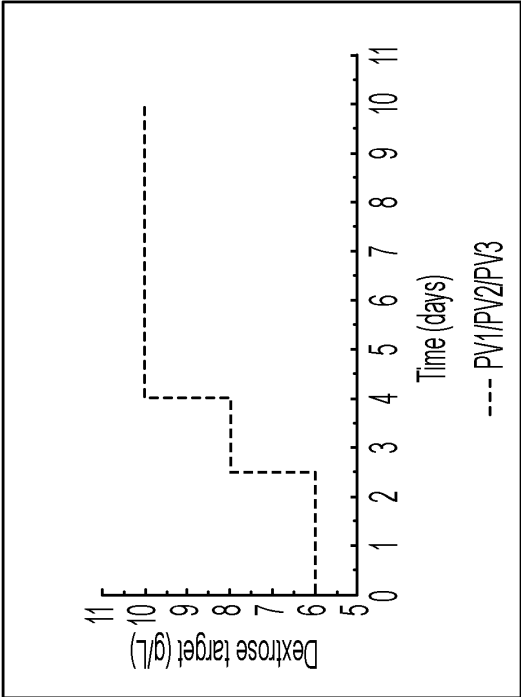


FIG. 58A



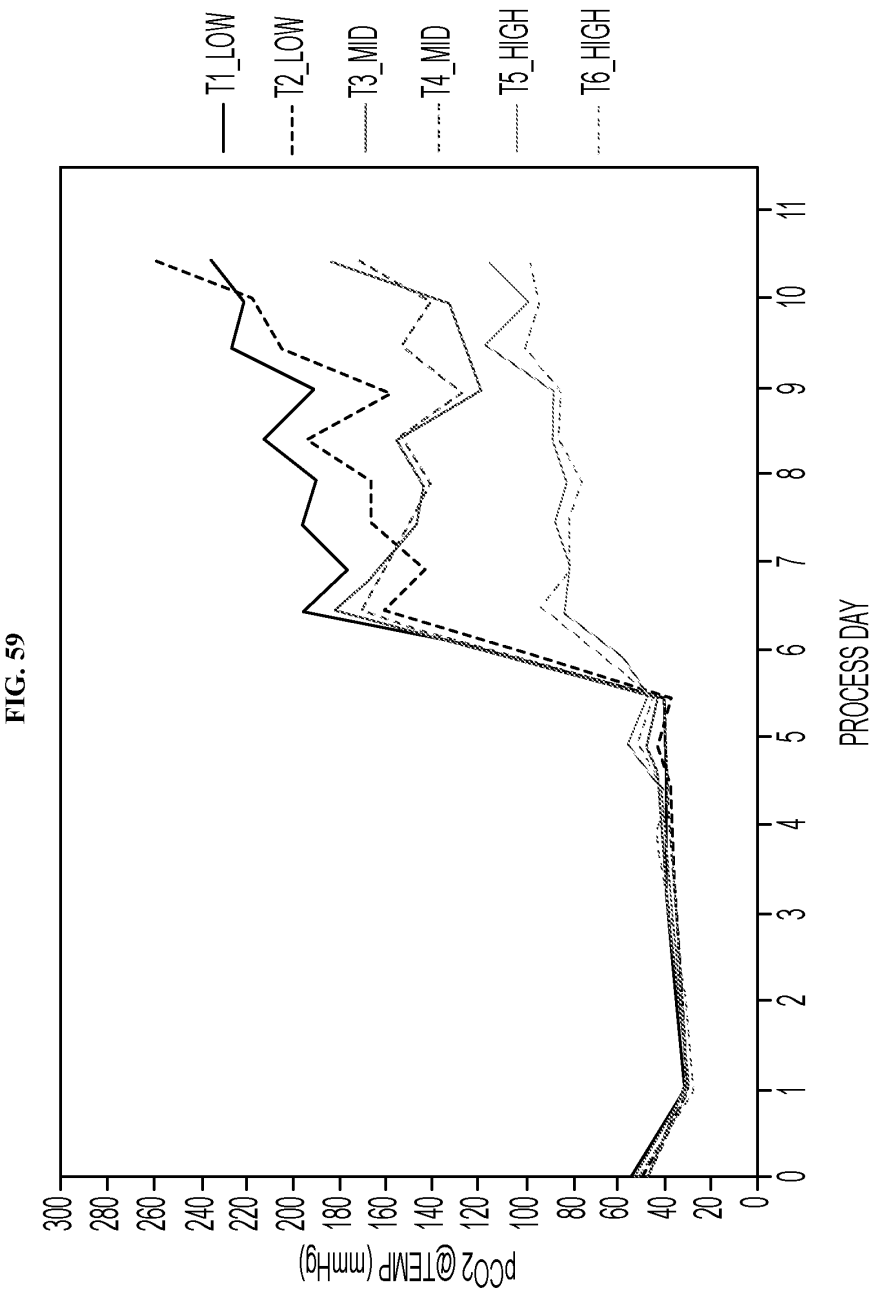


FIG. 60

