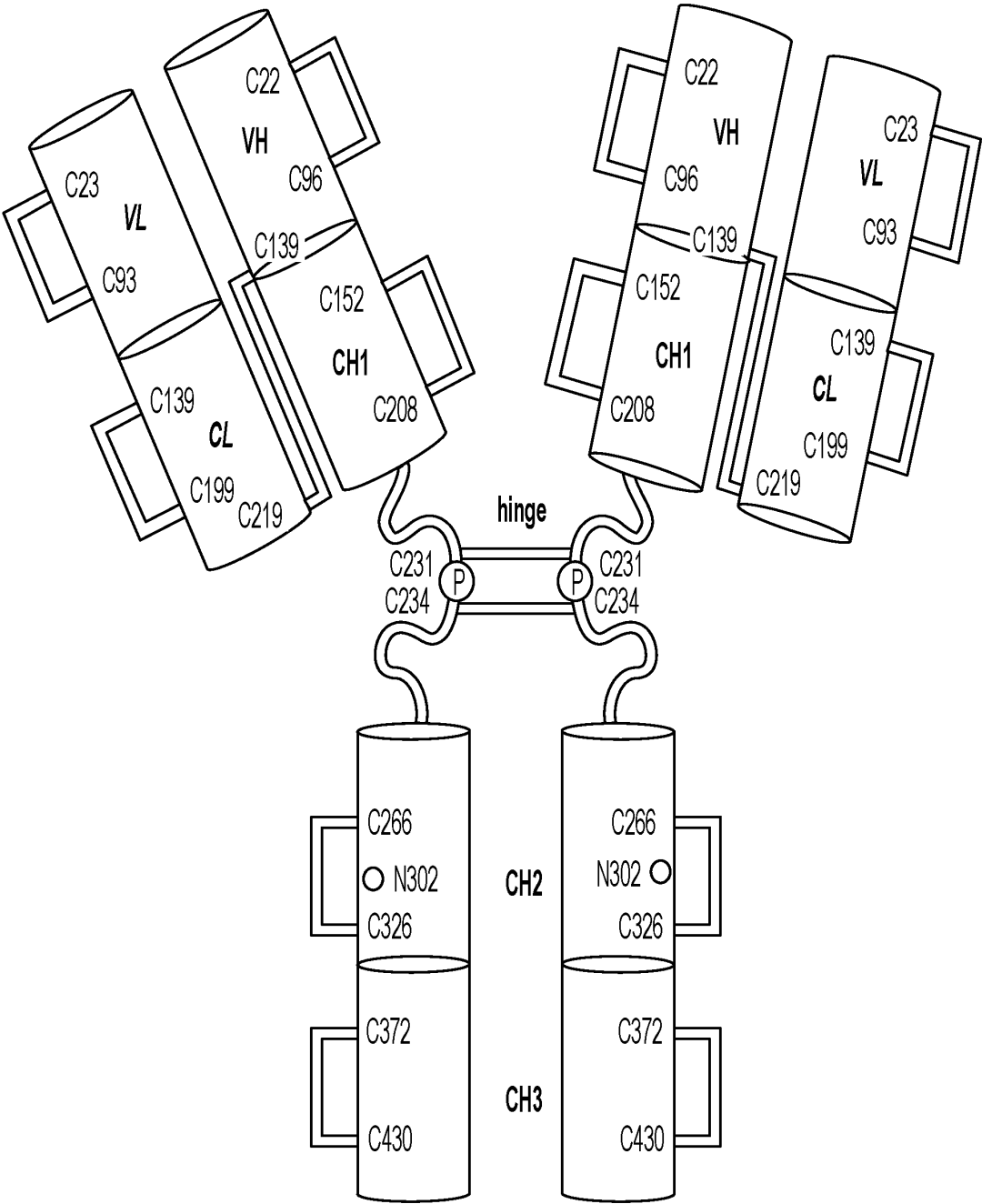
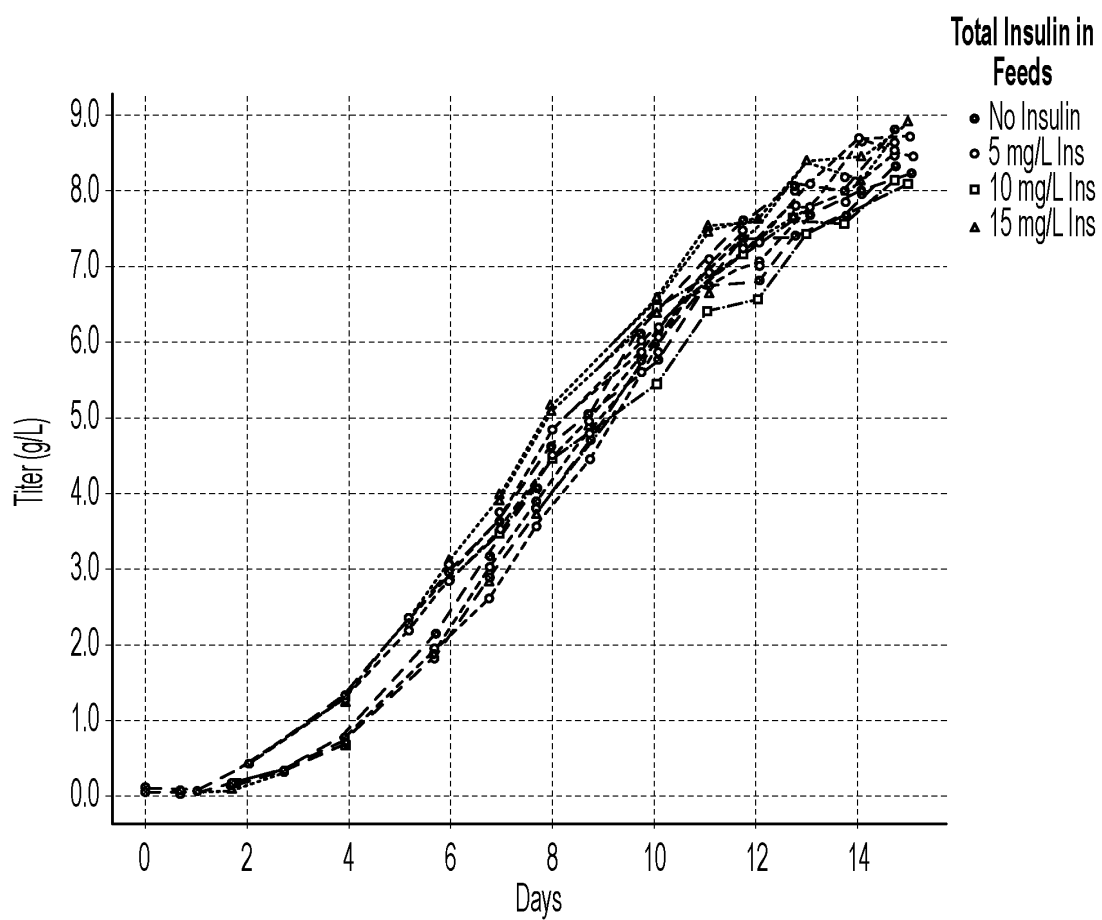


FIG. 1



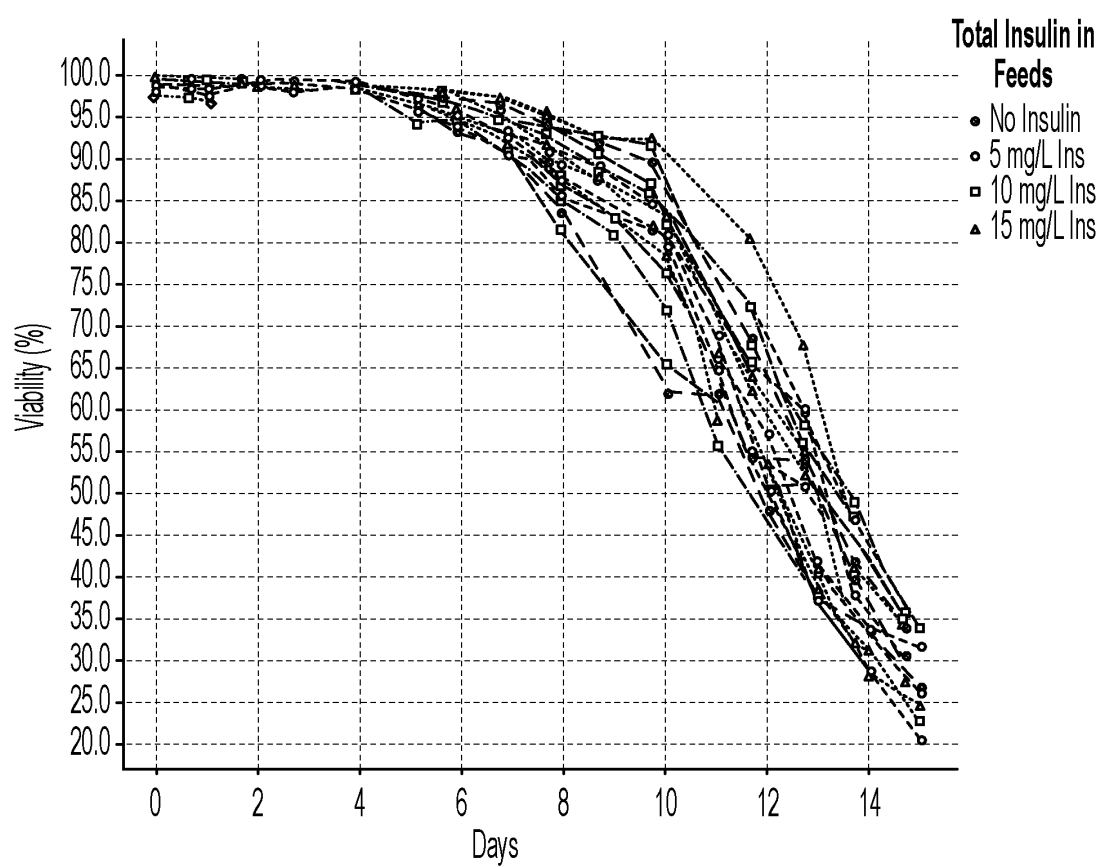
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FIG. 2



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FIG. 3



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FIG. 4

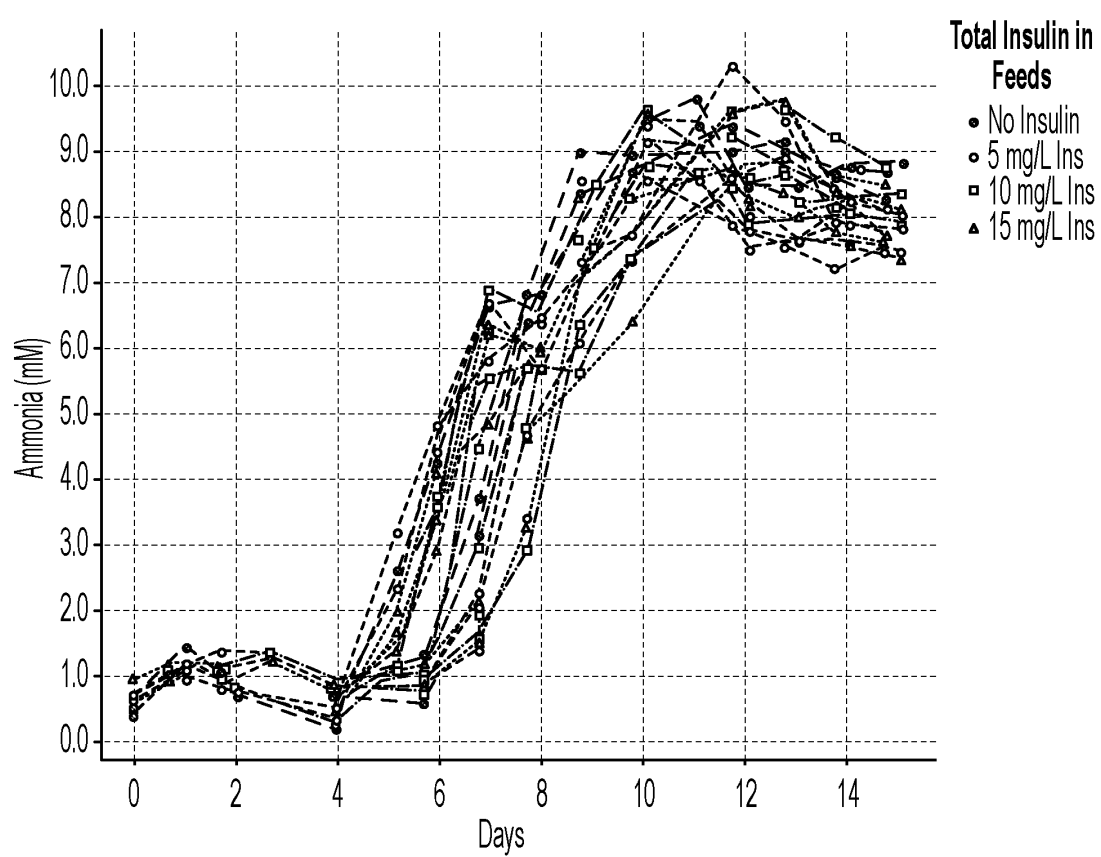
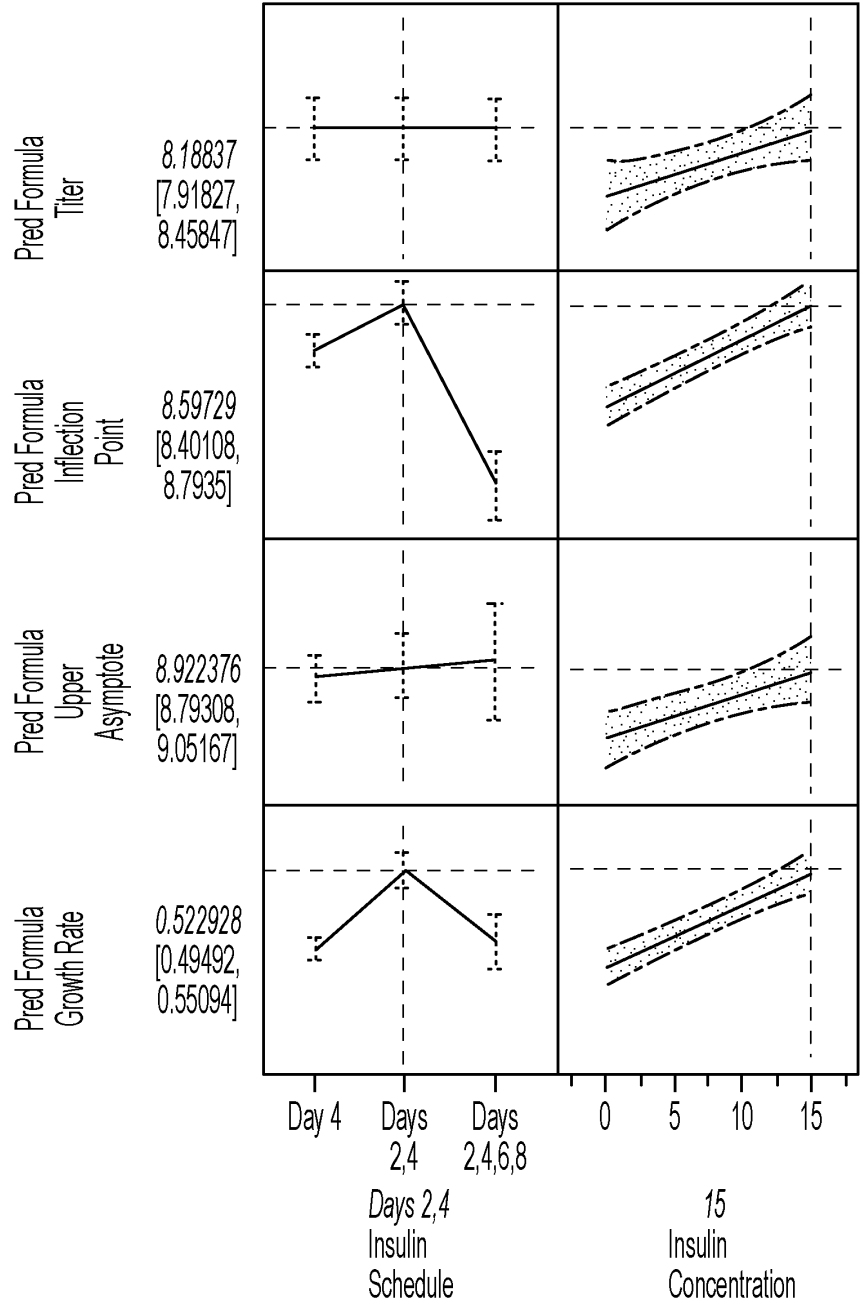


FIG. 5



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FIG. 6

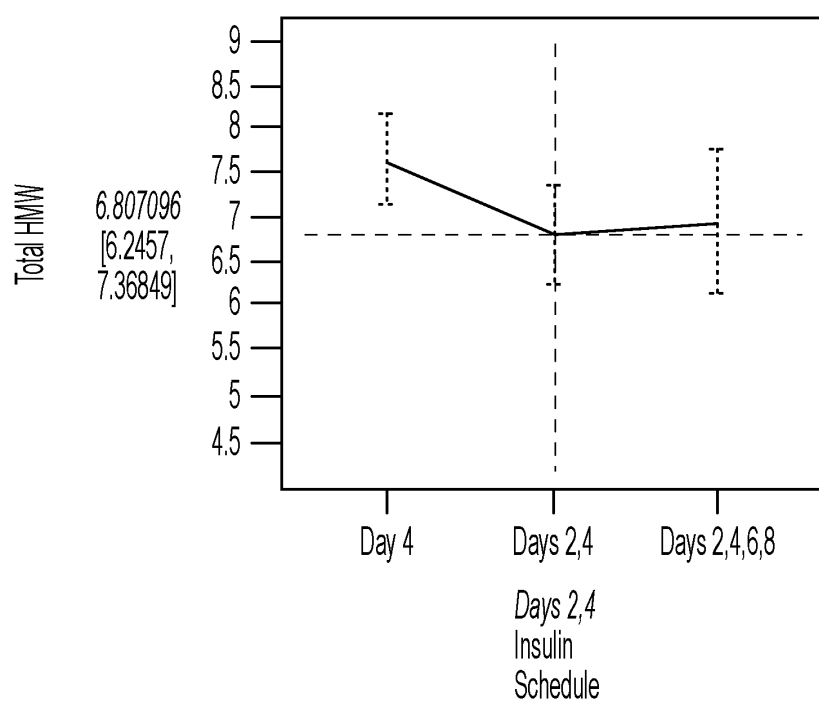


FIG. 7

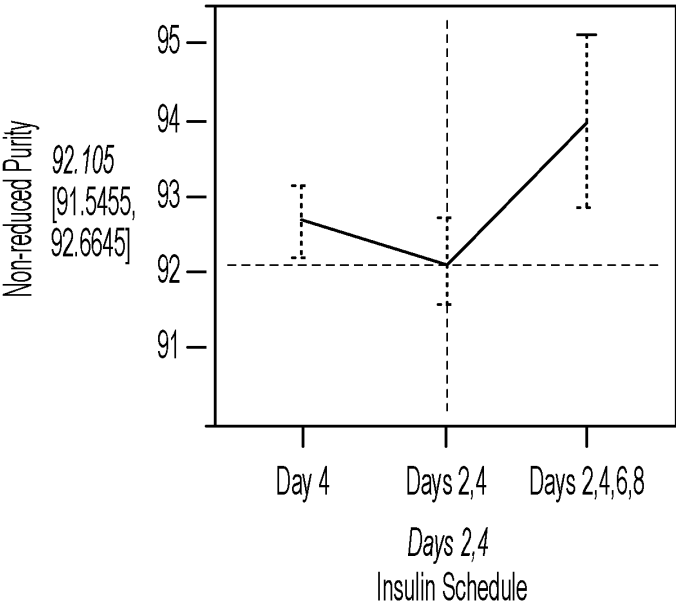


FIG. 8

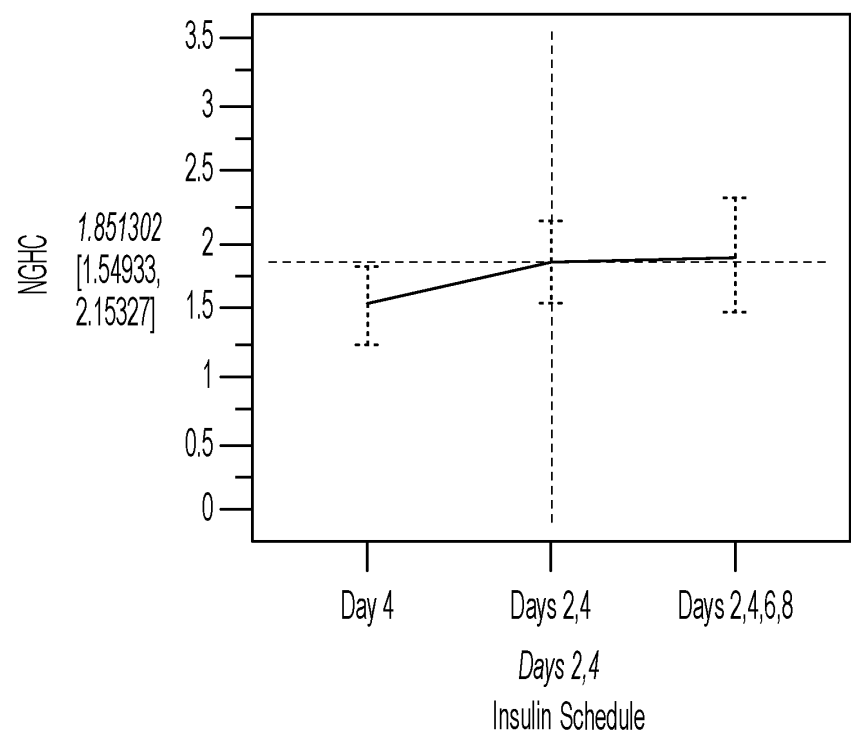
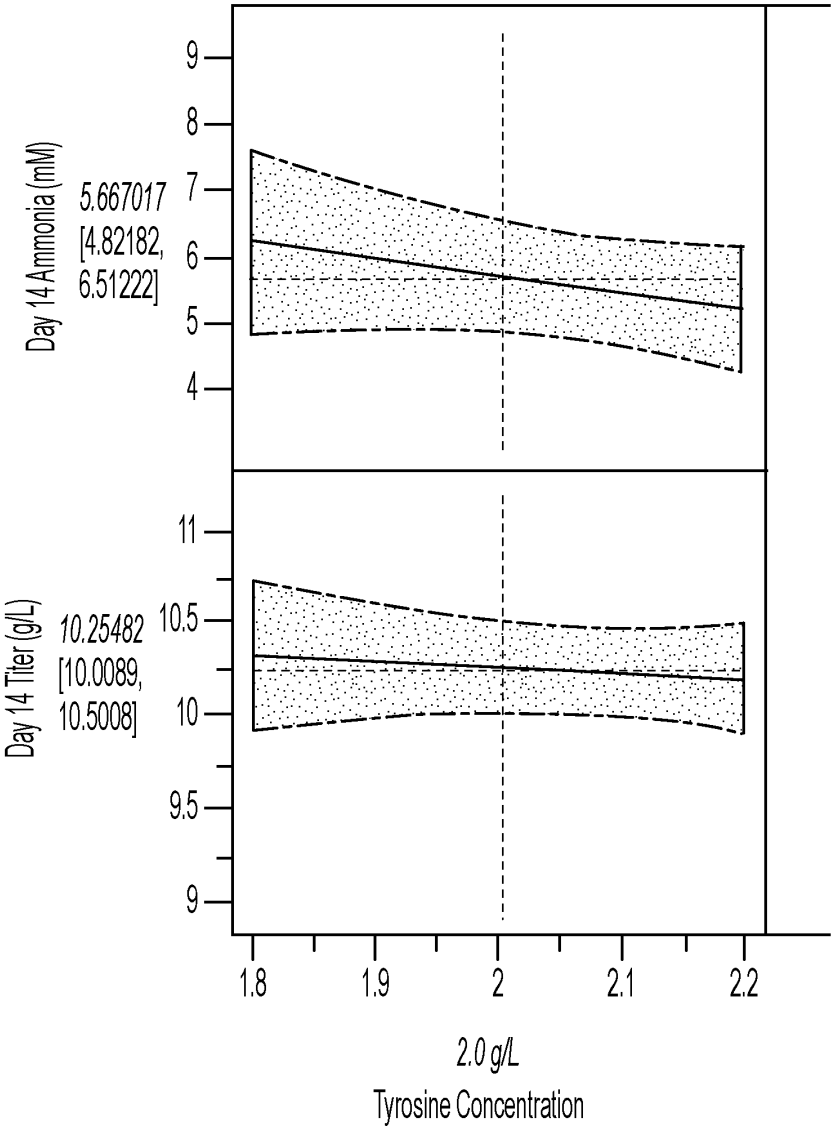
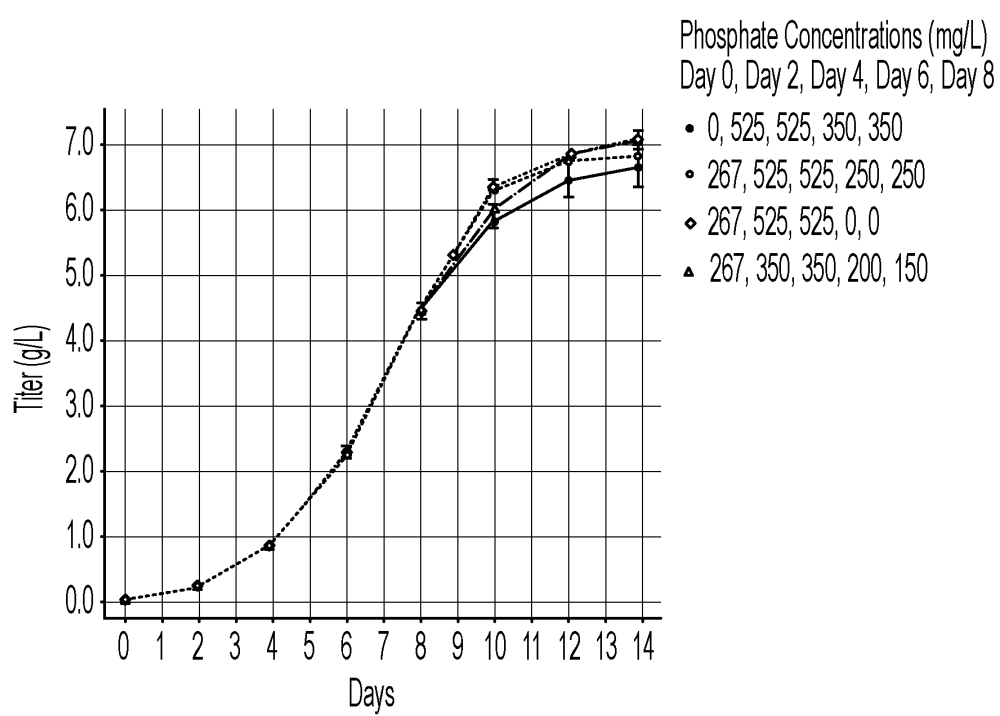


FIG. 9



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FIG. 10



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FIG. 11

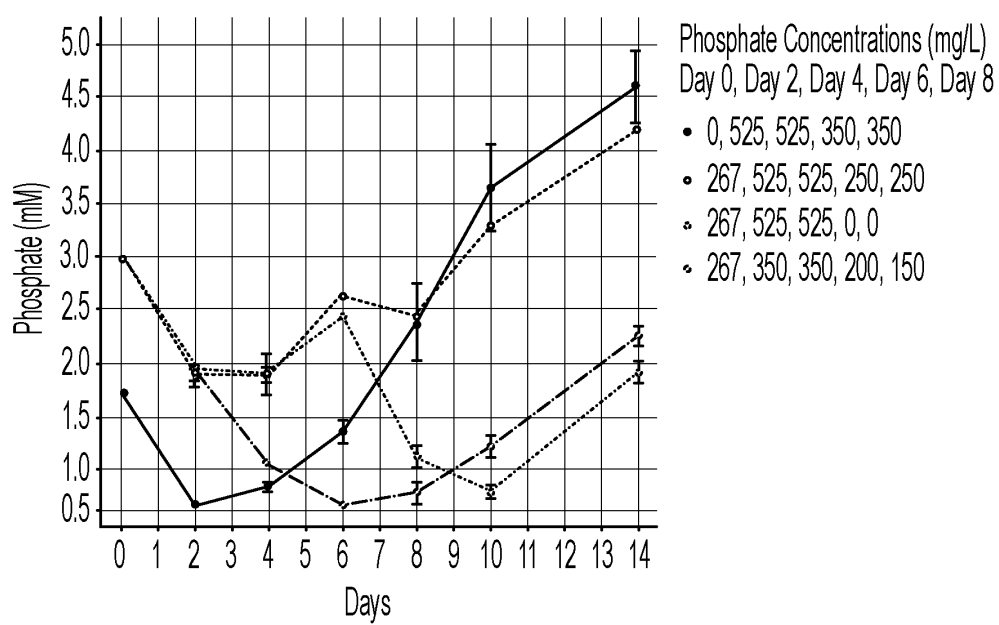


FIG. 12B

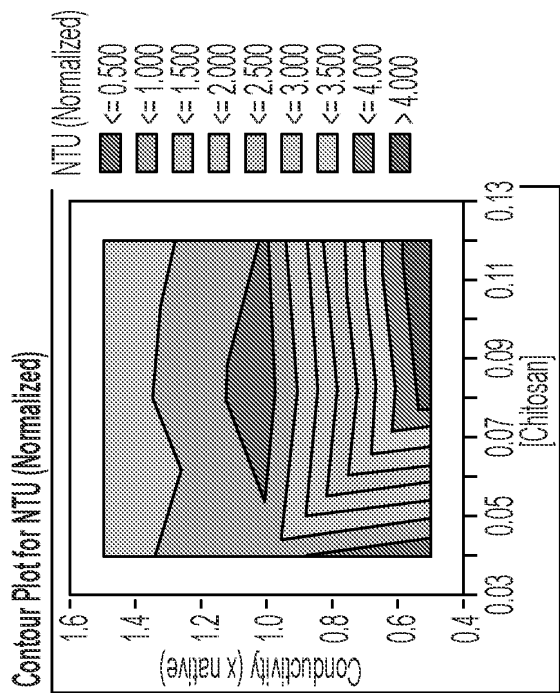


FIG. 12A

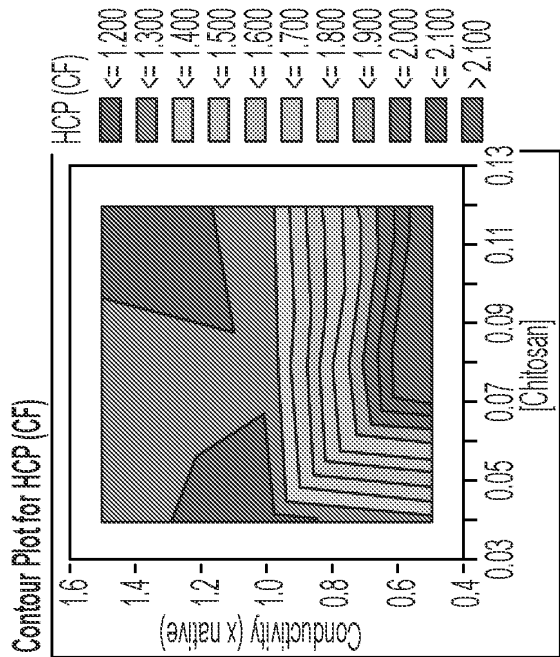


FIG. 13B

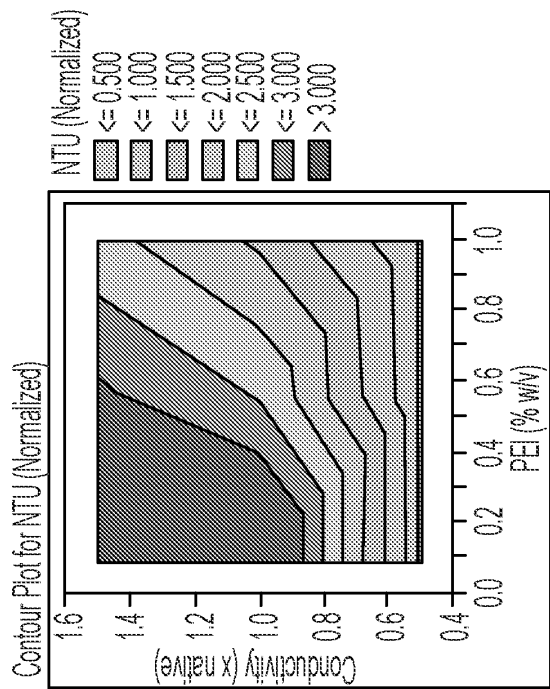


FIG. 13A

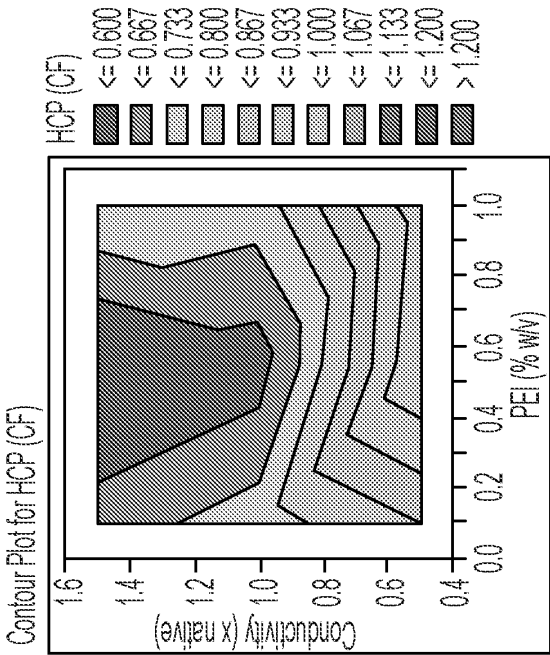
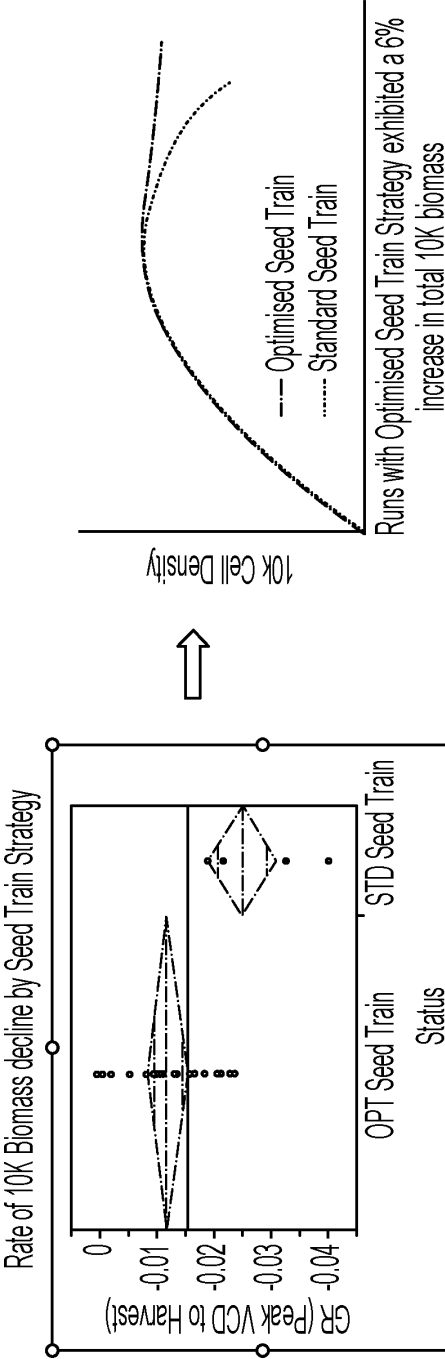


FIG. 14

	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



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FIG. 16A

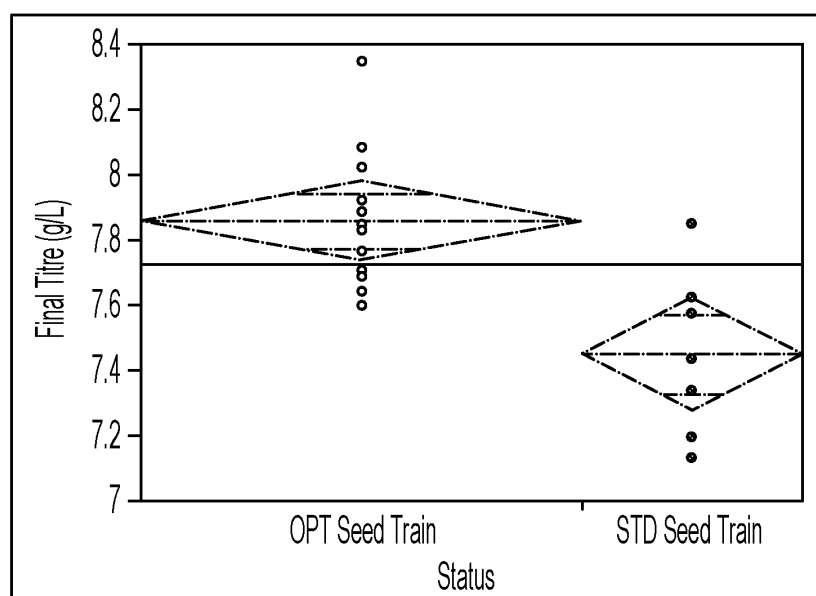
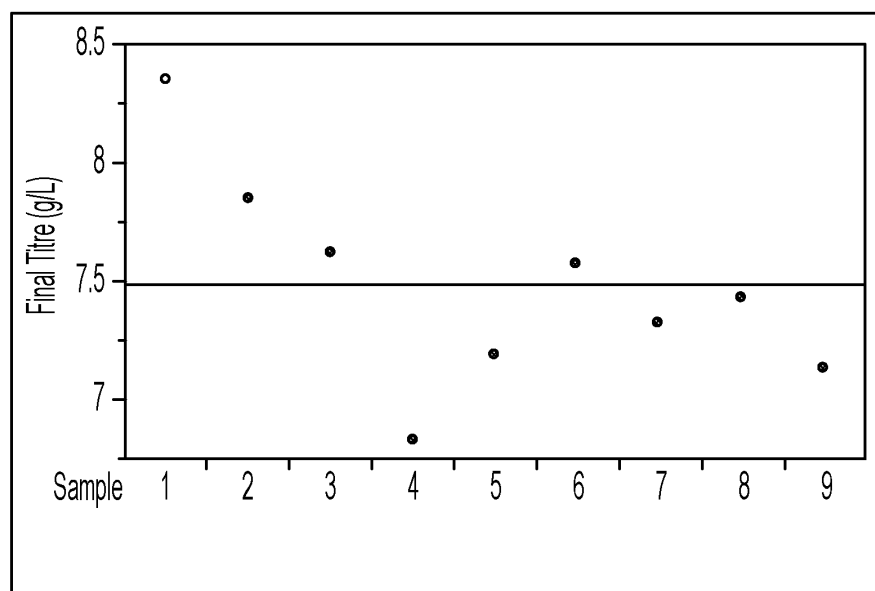


FIG. 16B



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FIG. 17

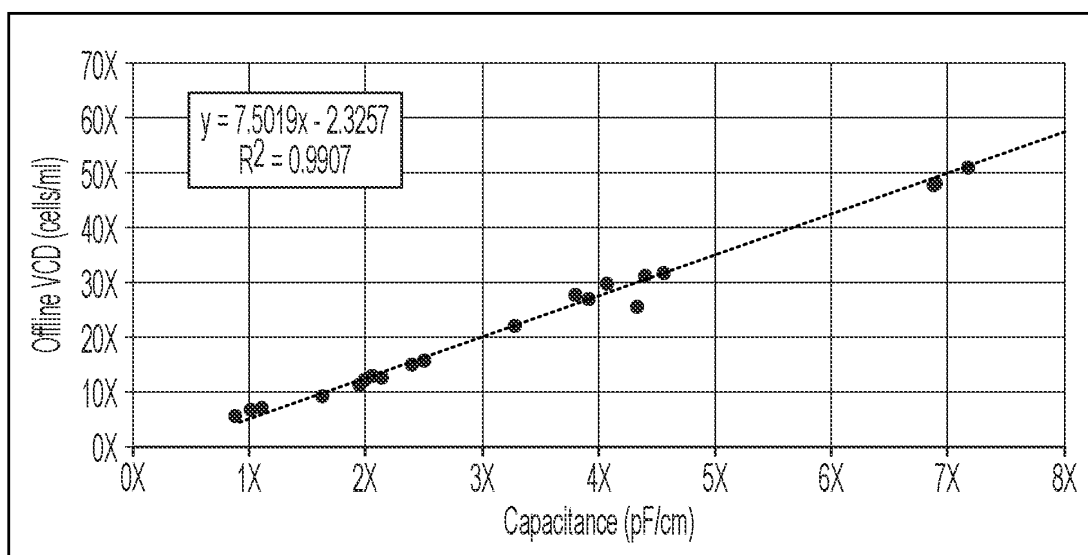
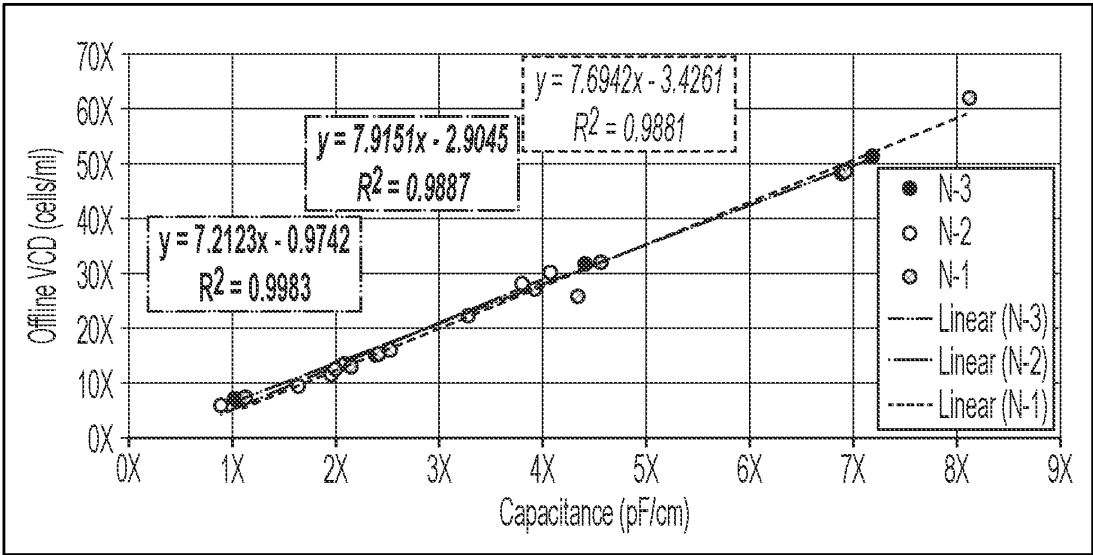


FIG. 18



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FIG. 19

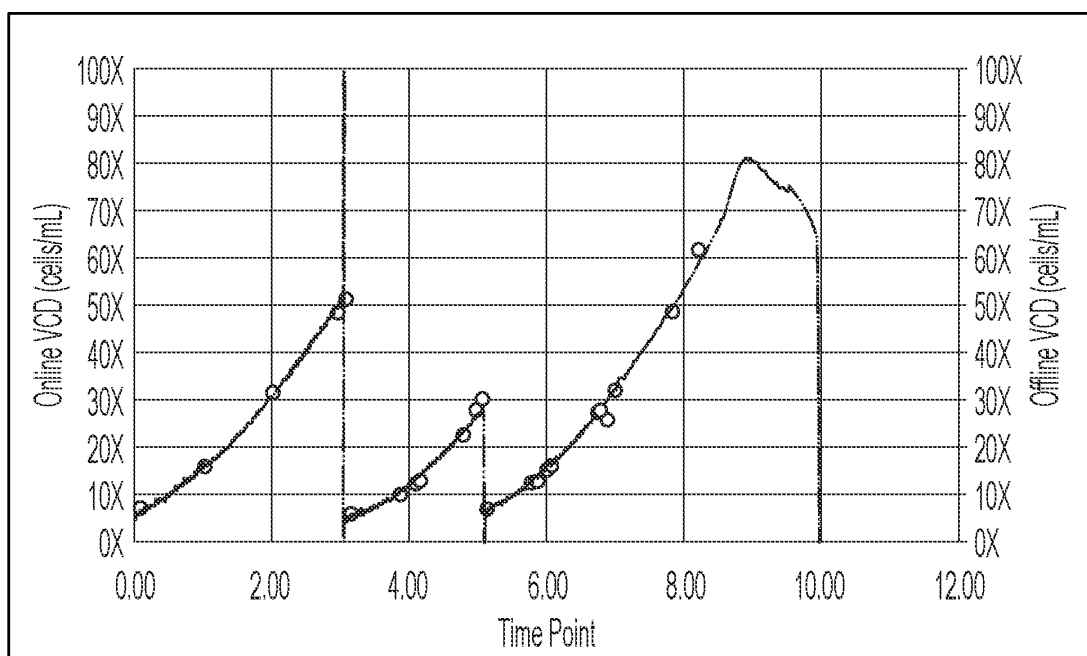
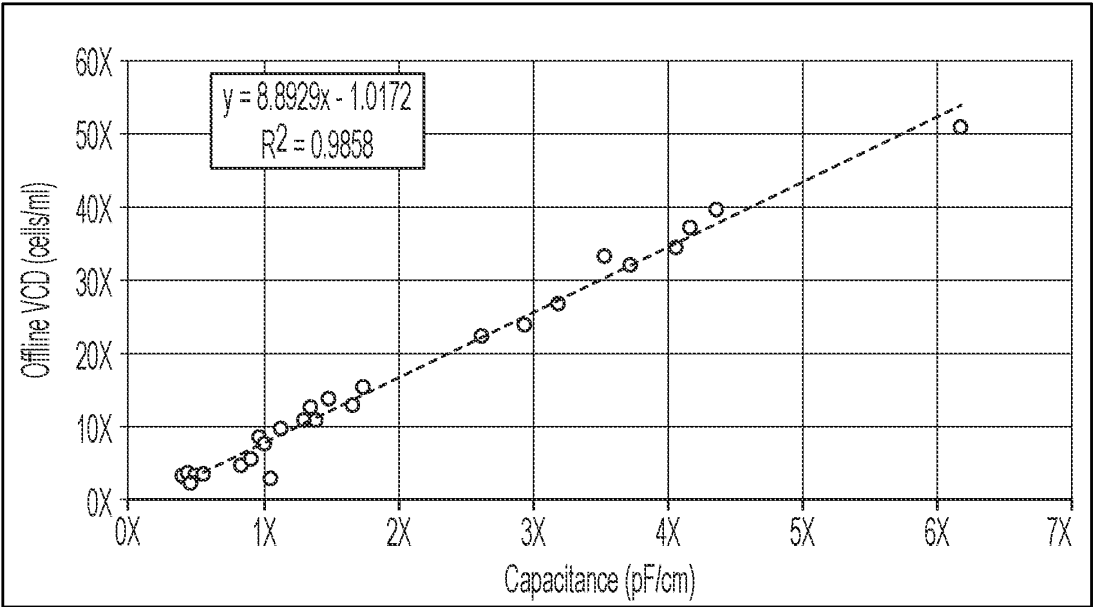
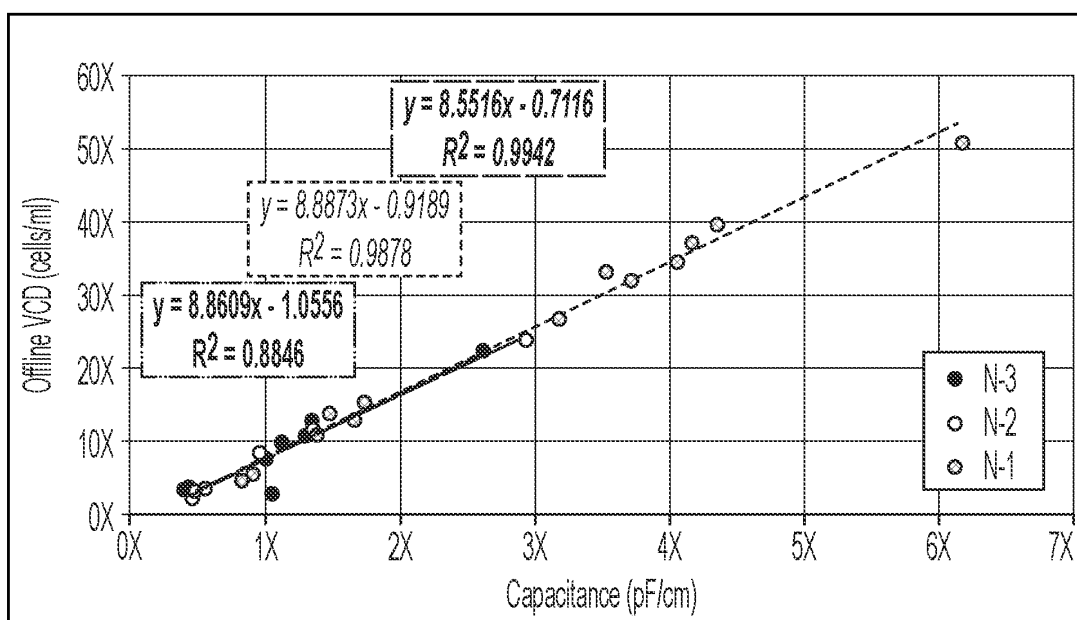


FIG. 20



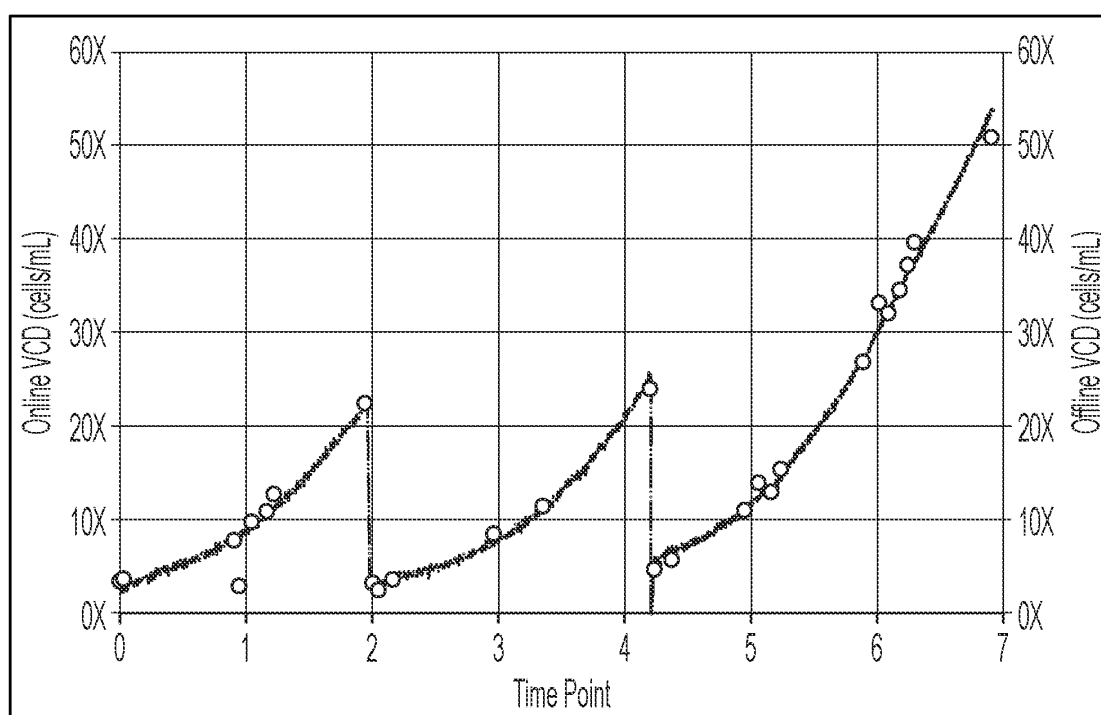
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FIG. 21



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FIG. 22



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FIG. 23

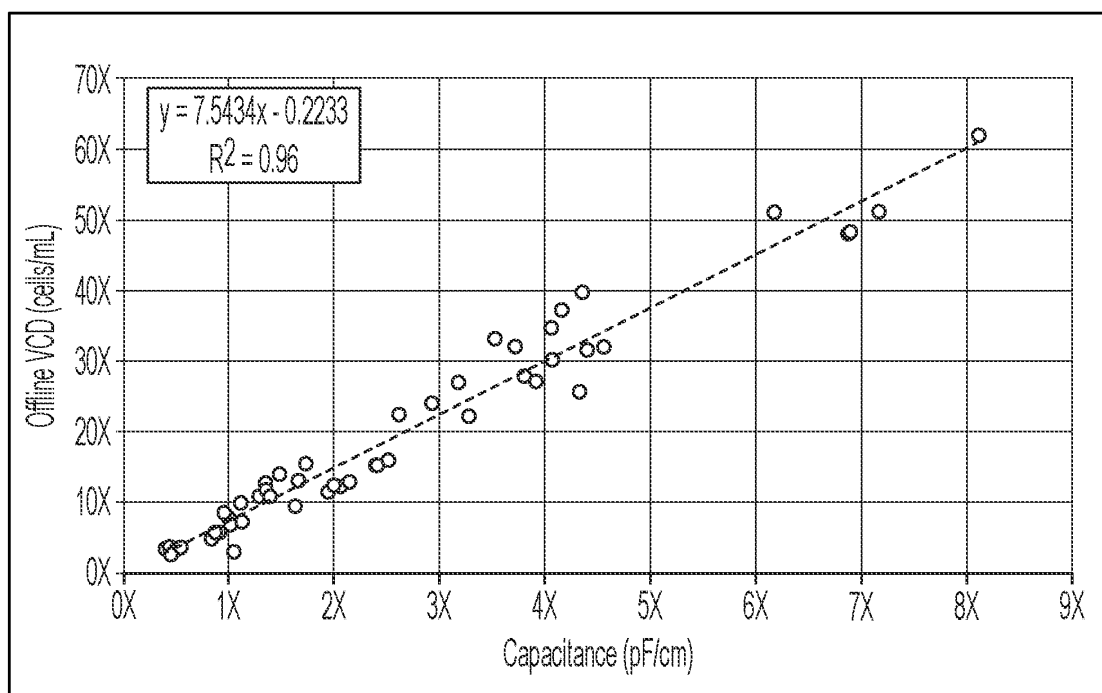


FIG. 24A

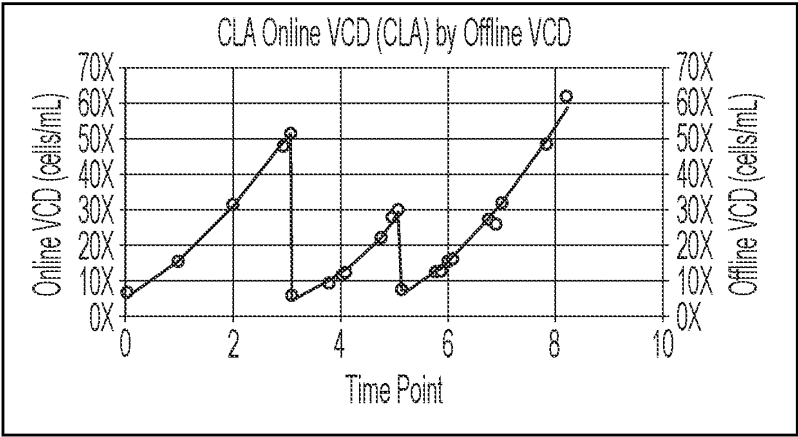


FIG. 24B

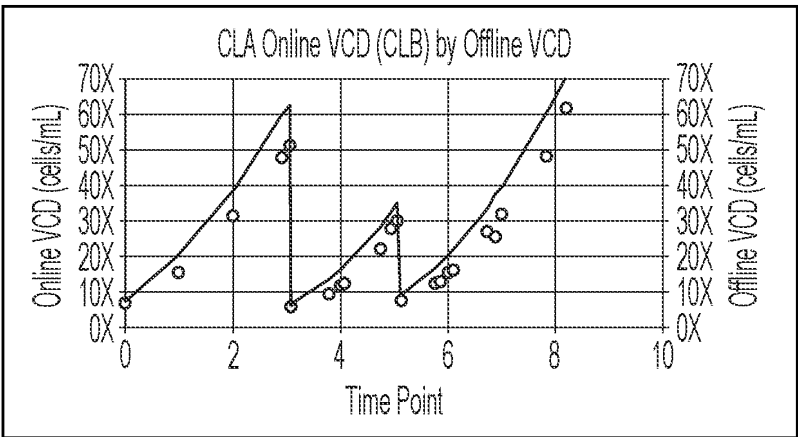


FIG. 24C

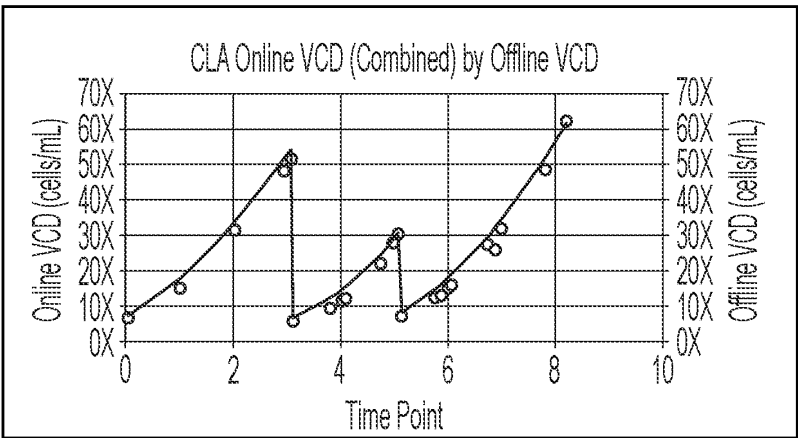


FIG. 25A

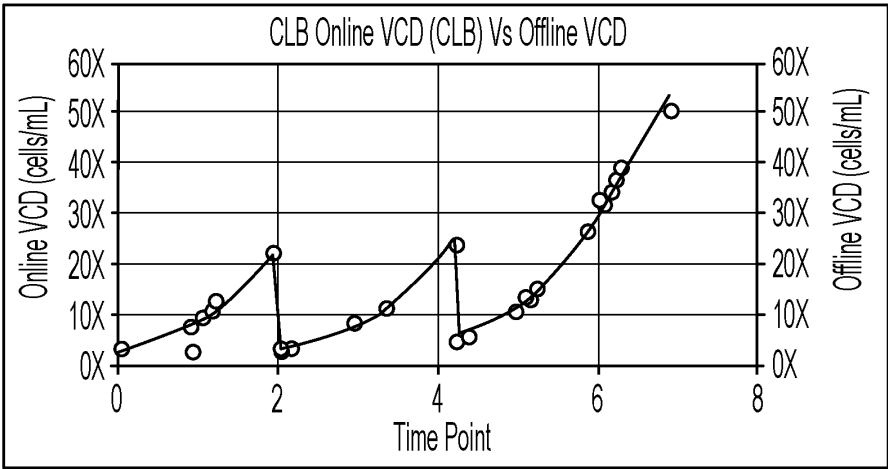


FIG. 25B

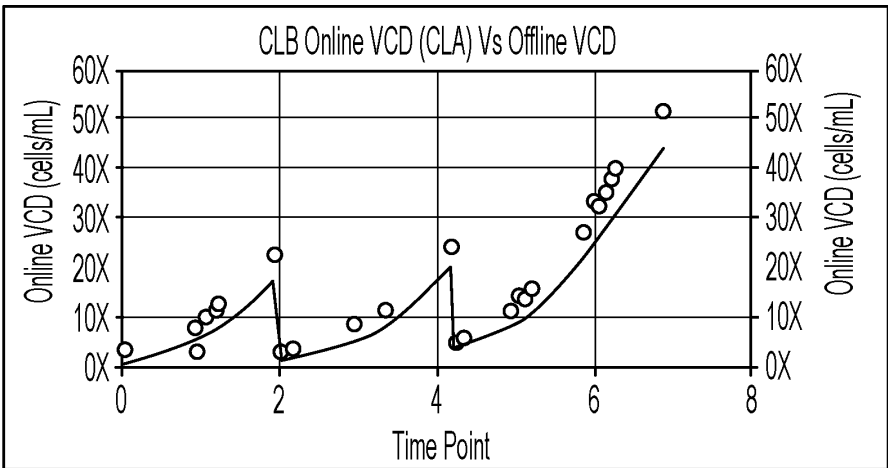


FIG. 25C

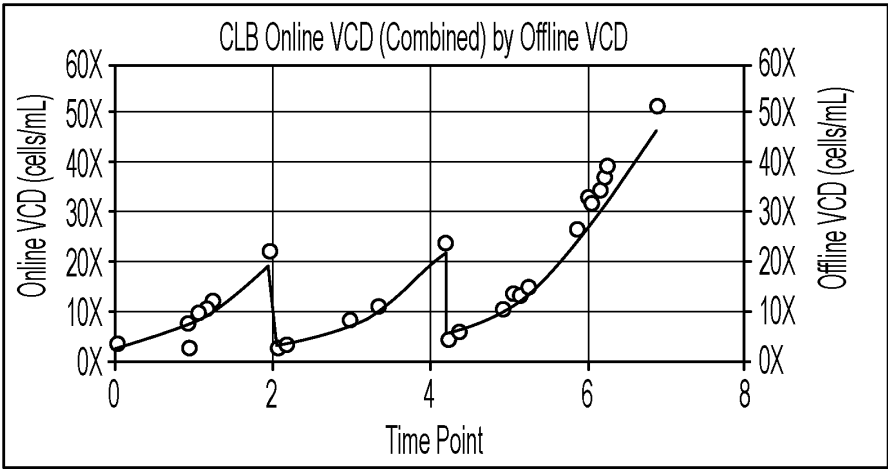


FIG. 26A

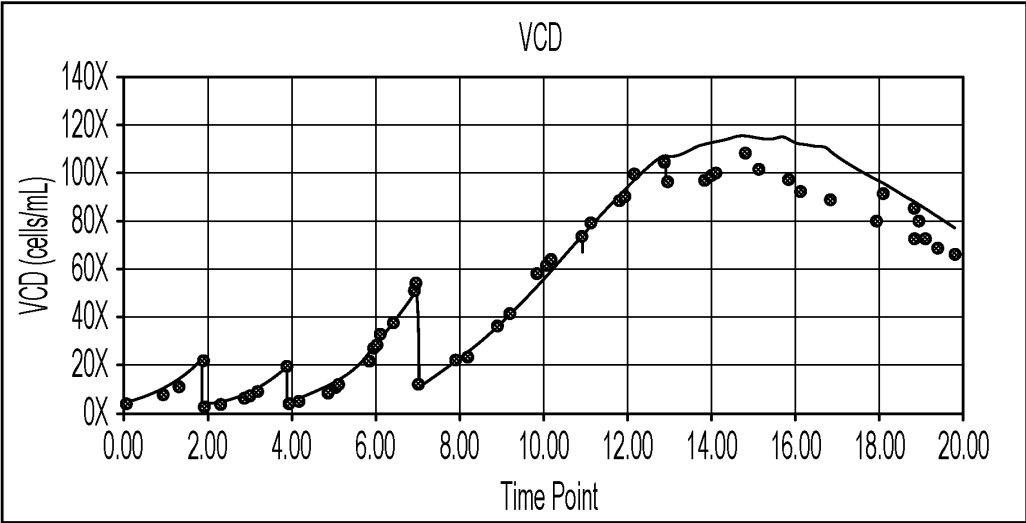


FIG. 26B

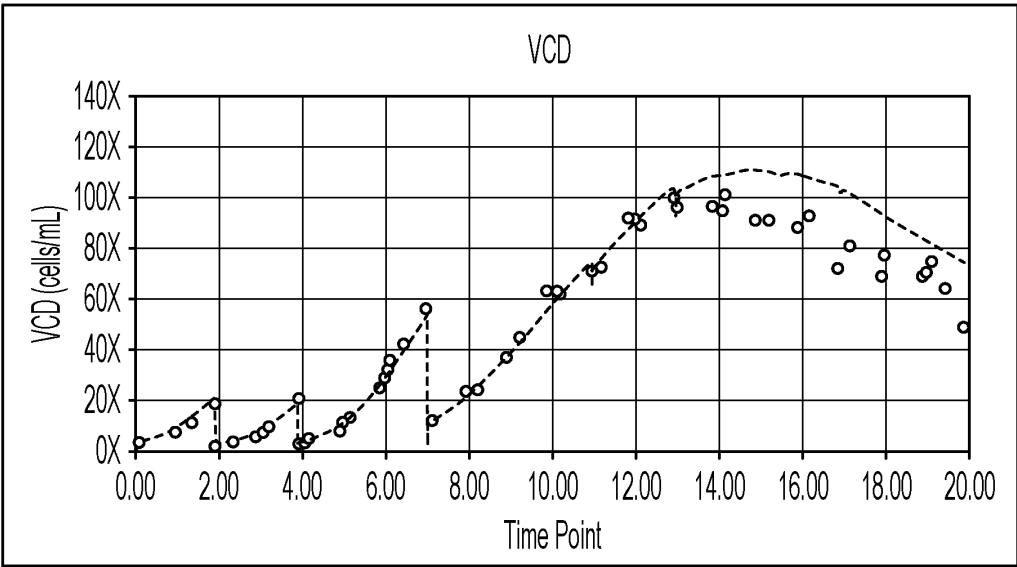


FIG. 27B

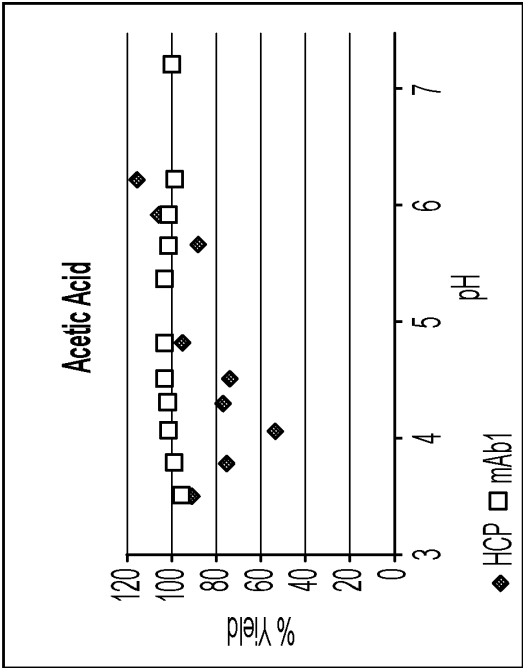
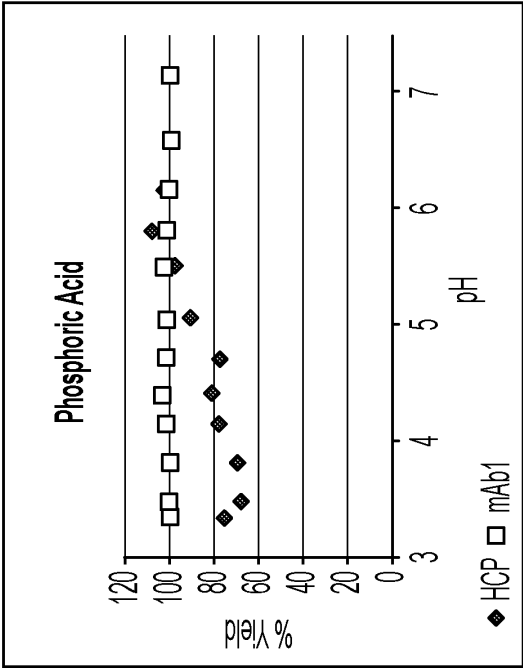
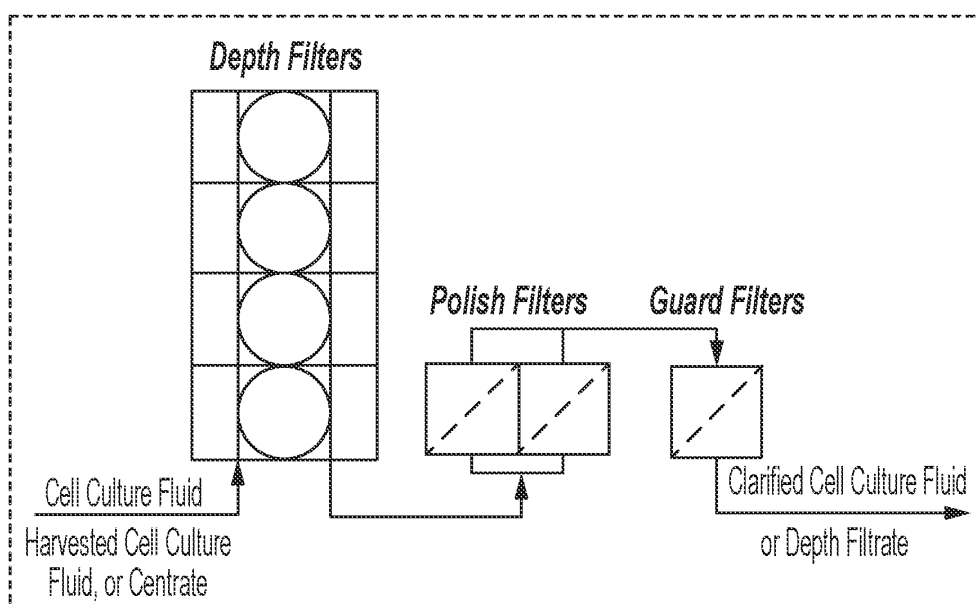


FIG. 27A



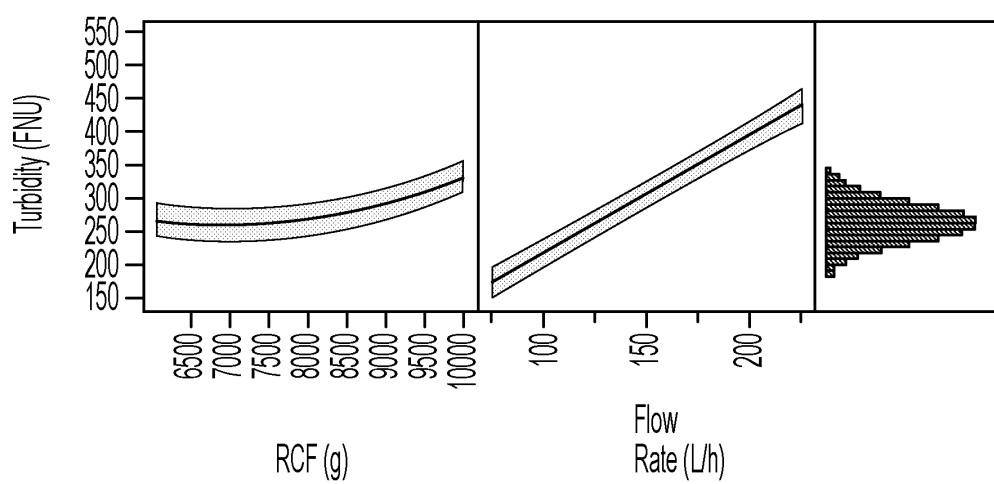
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FIG. 28

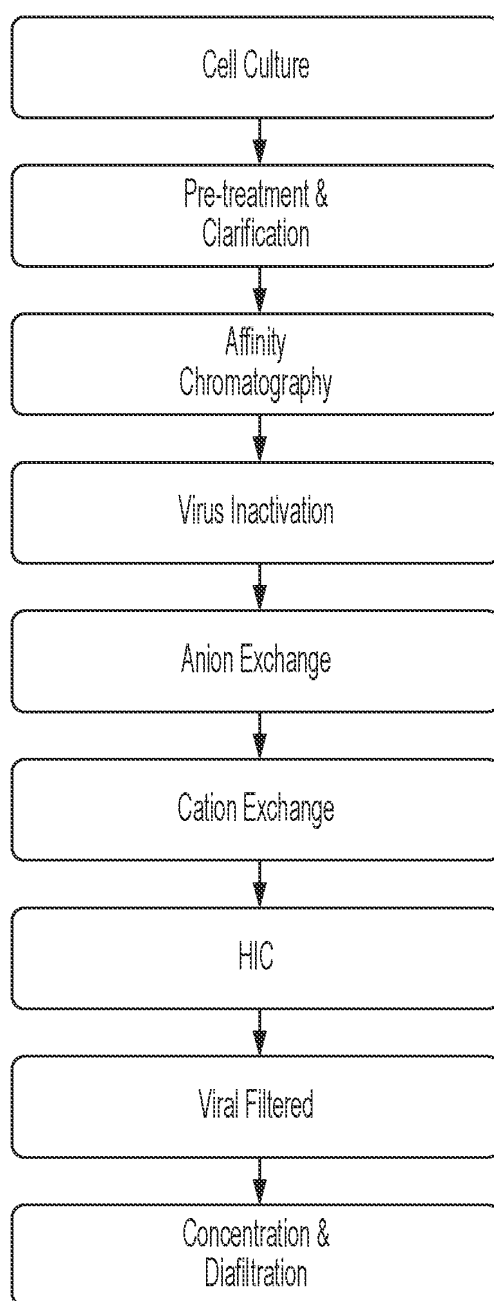


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FIG. 29



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FIG. 30

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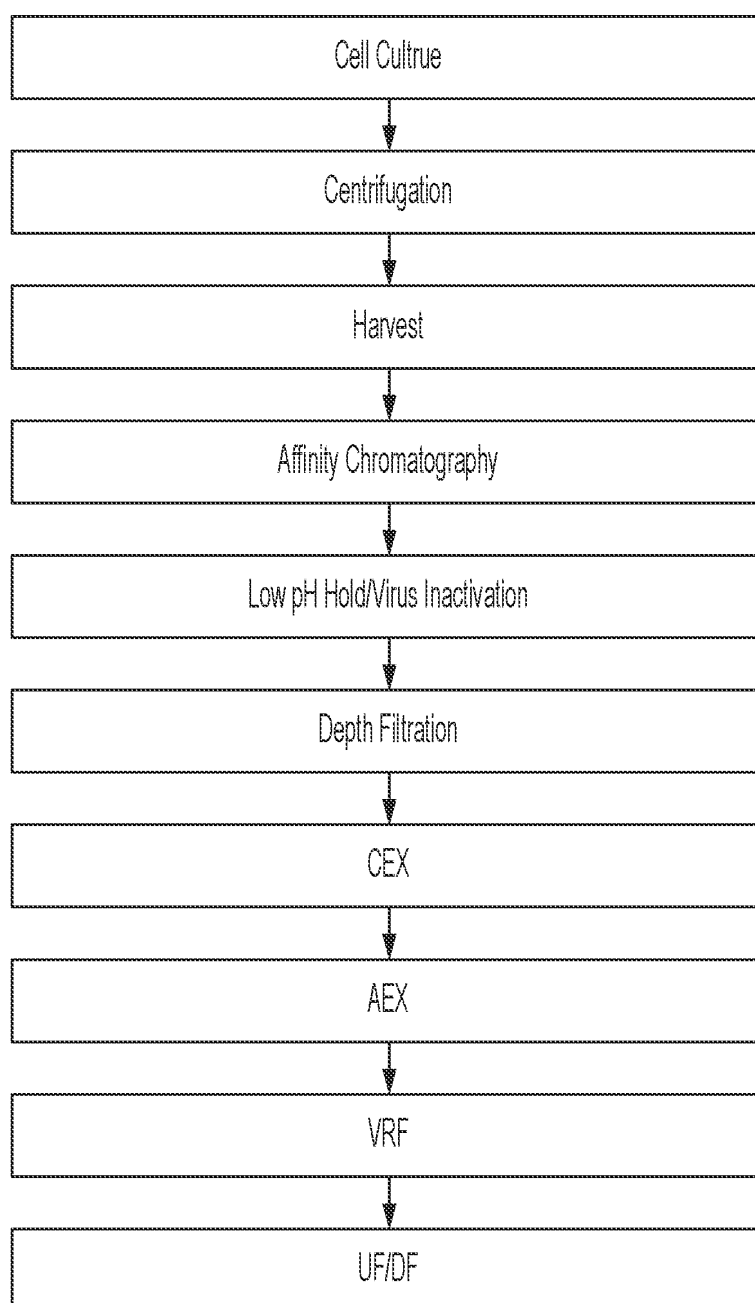
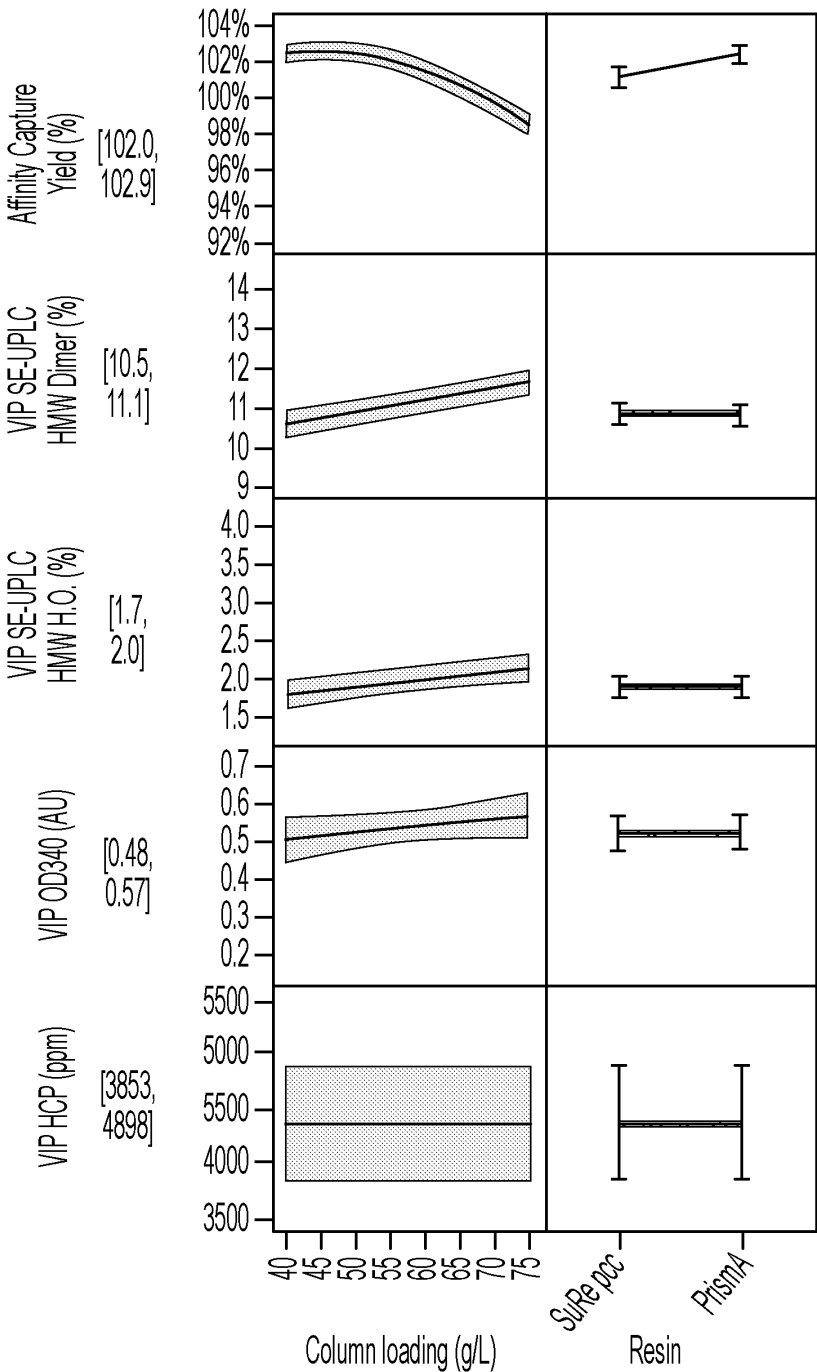
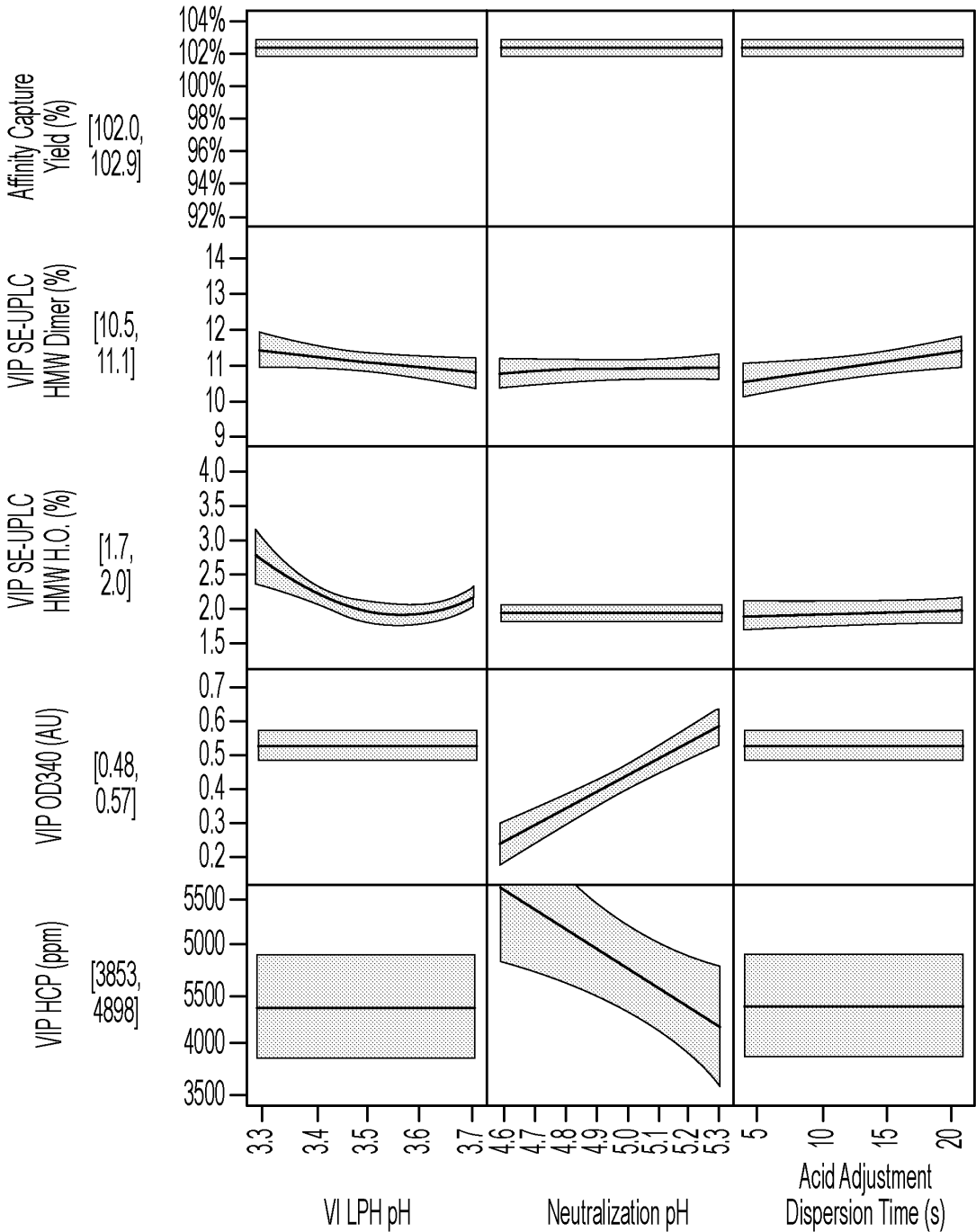
FIG. 31

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

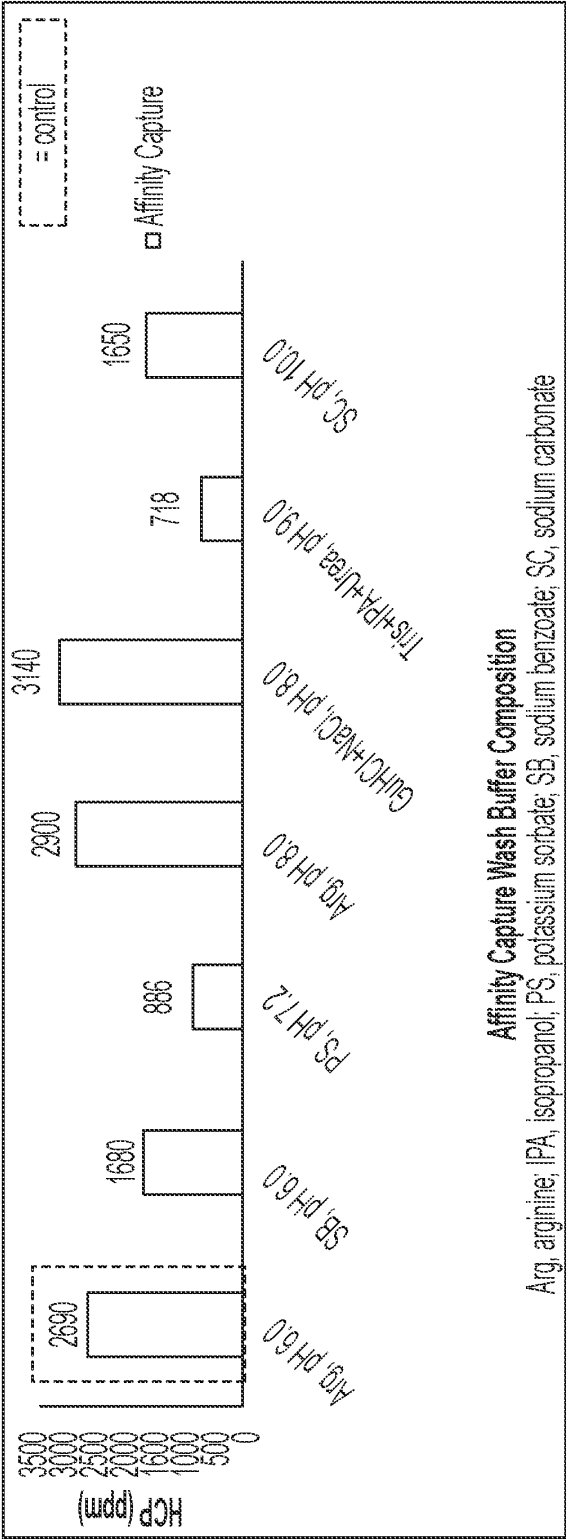
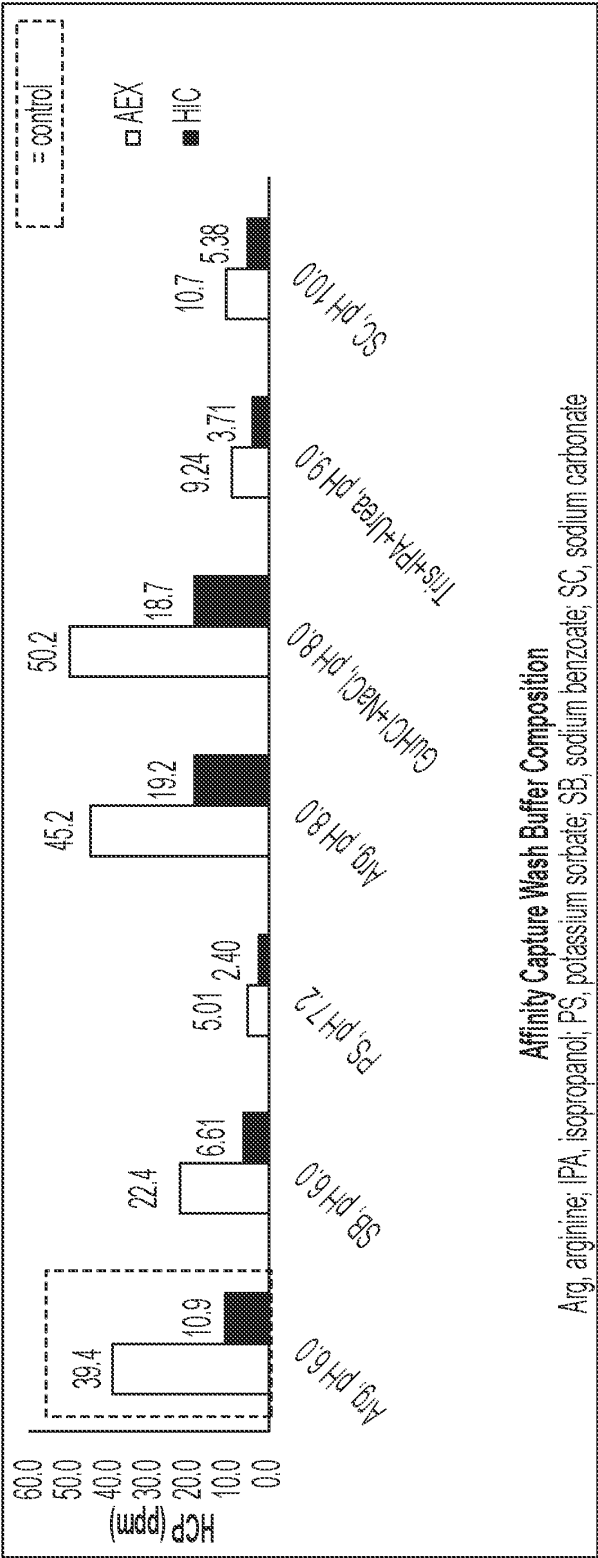


FIG. 34



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FIG. 35

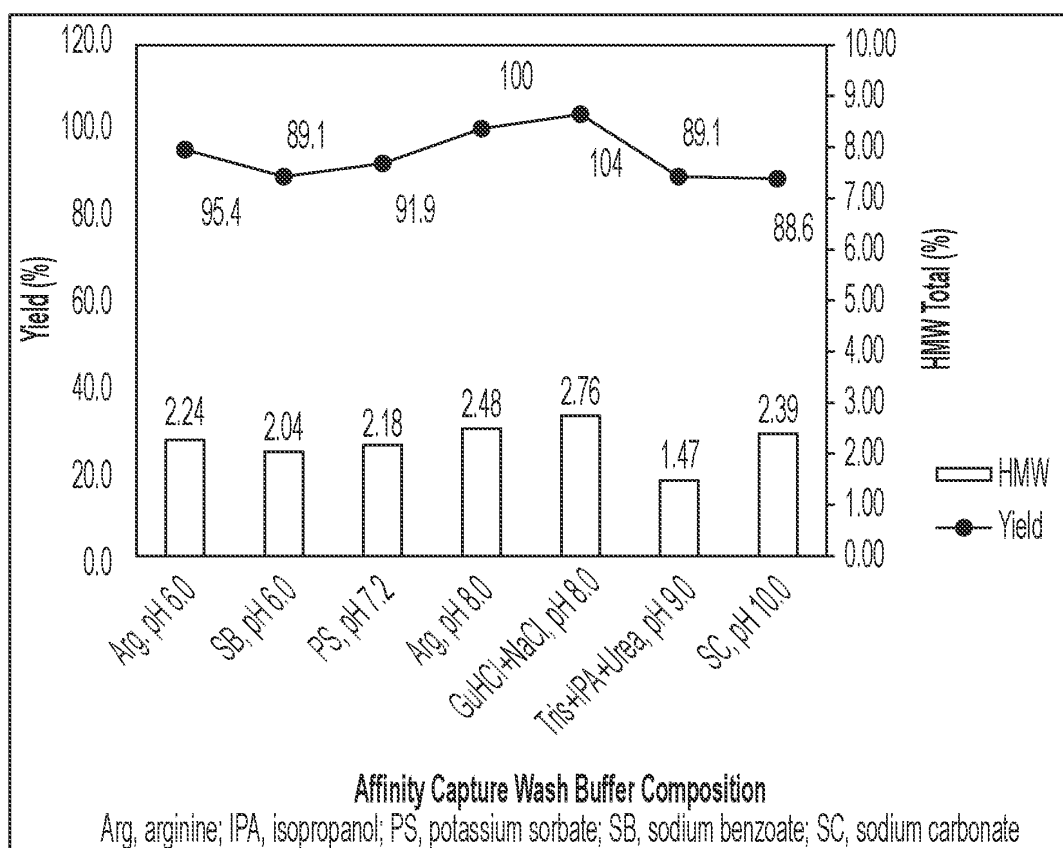
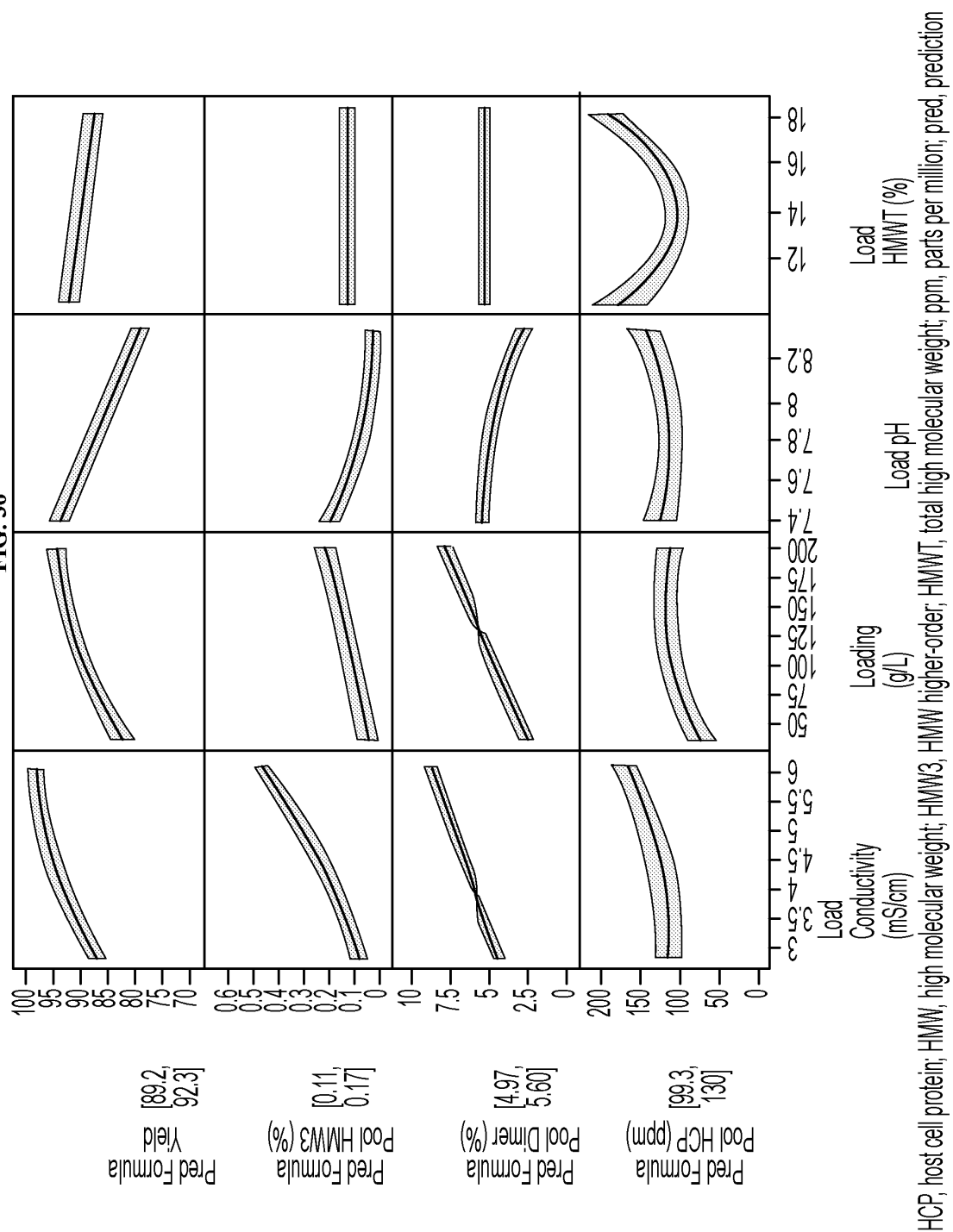
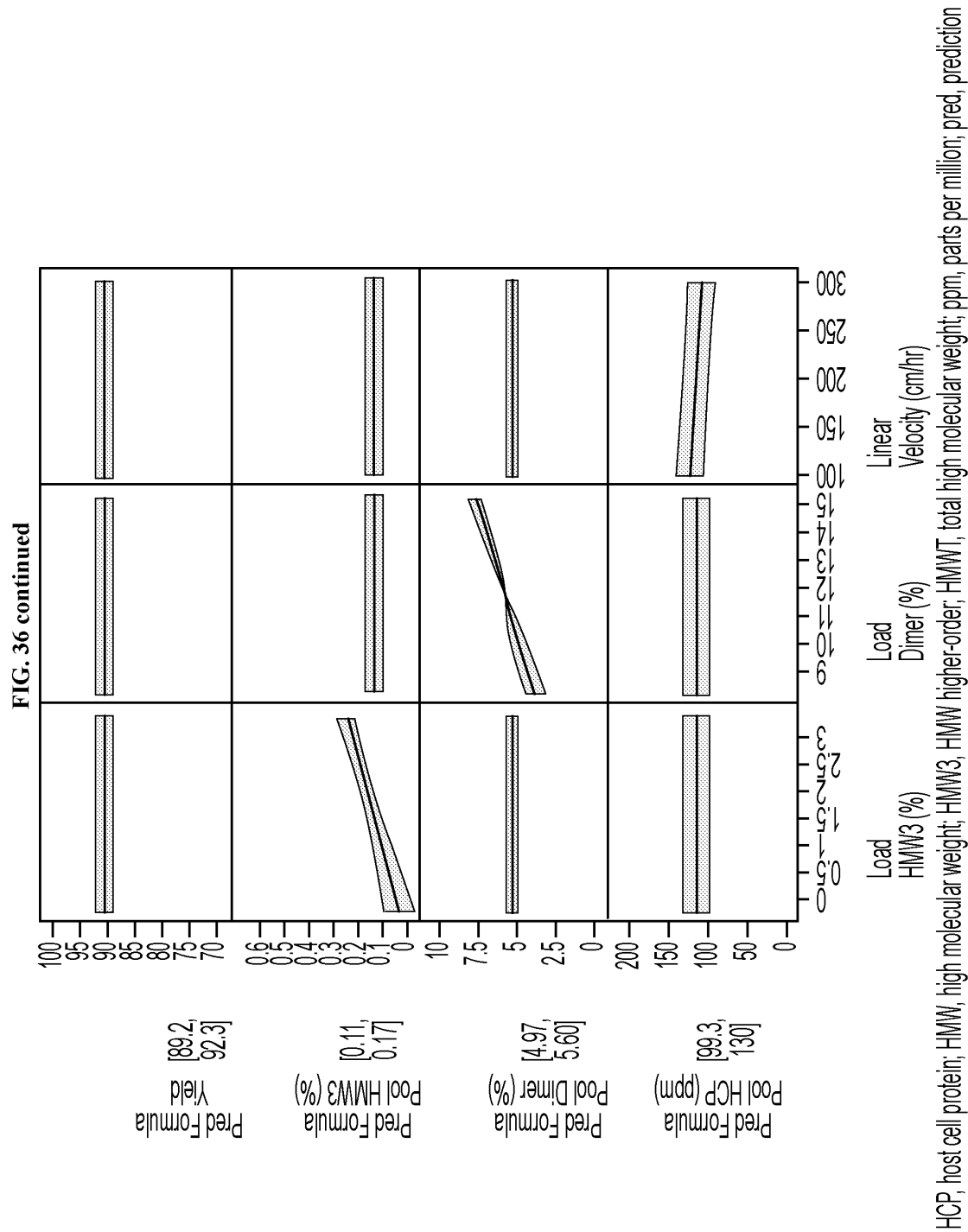
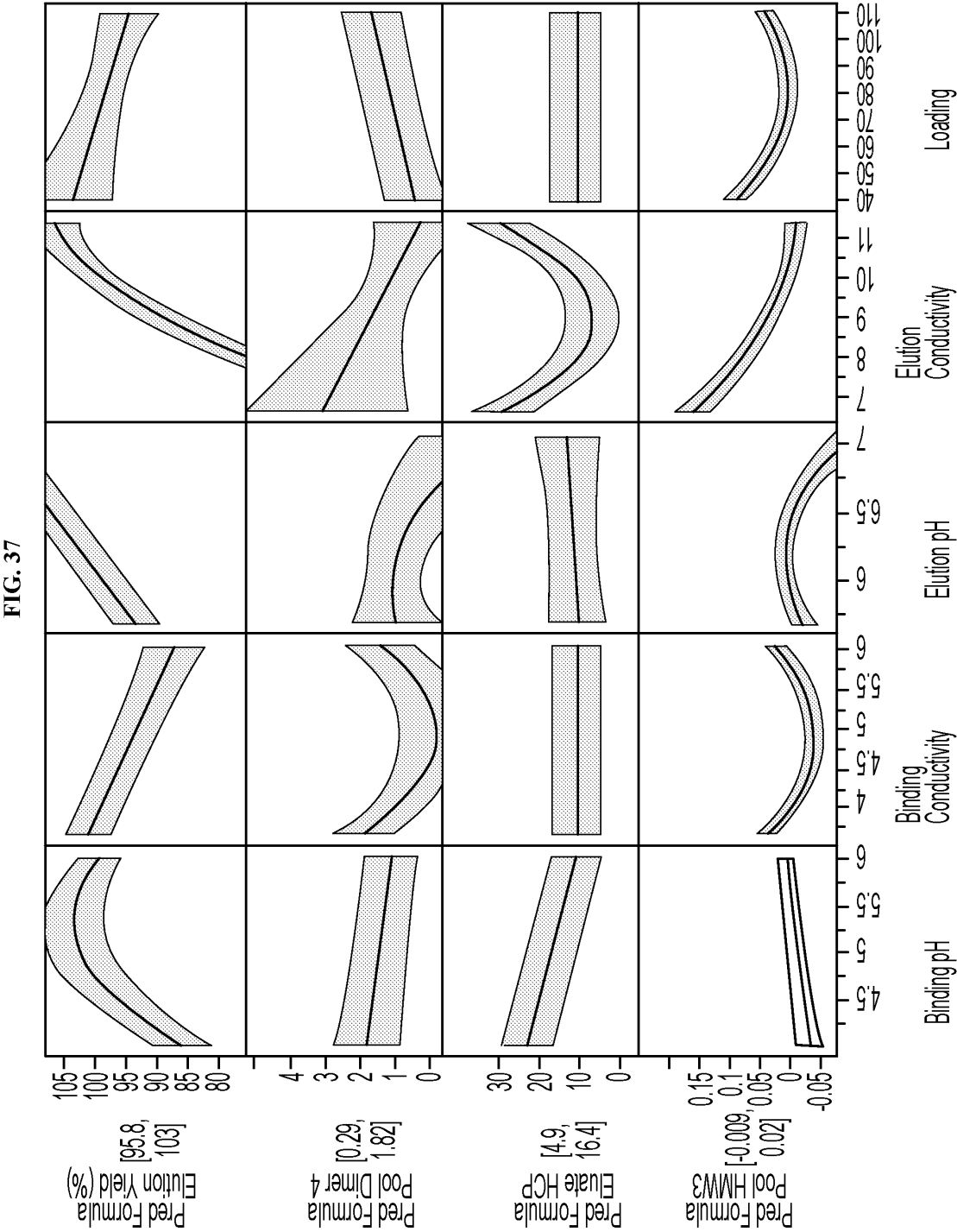


FIG. 36







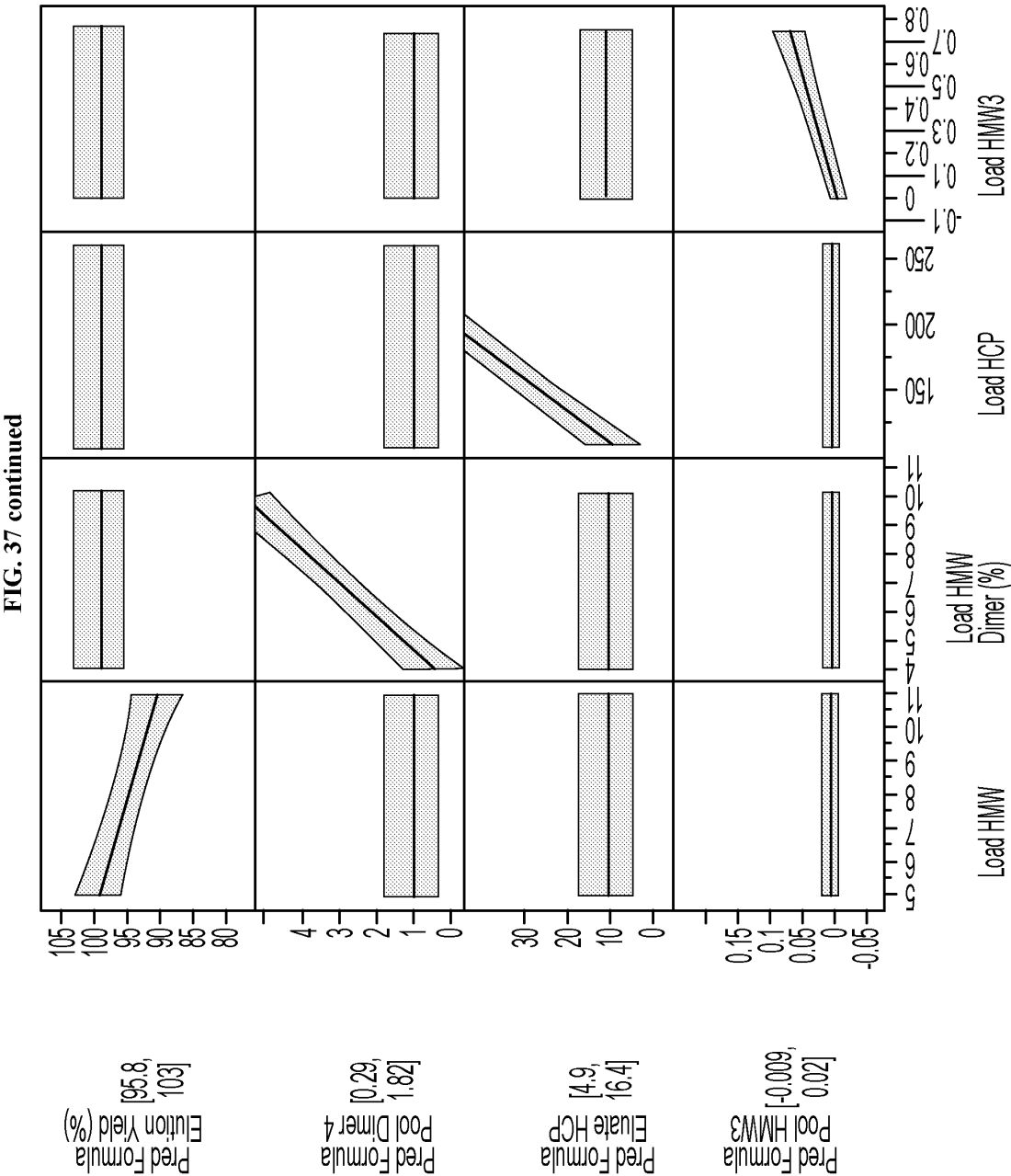
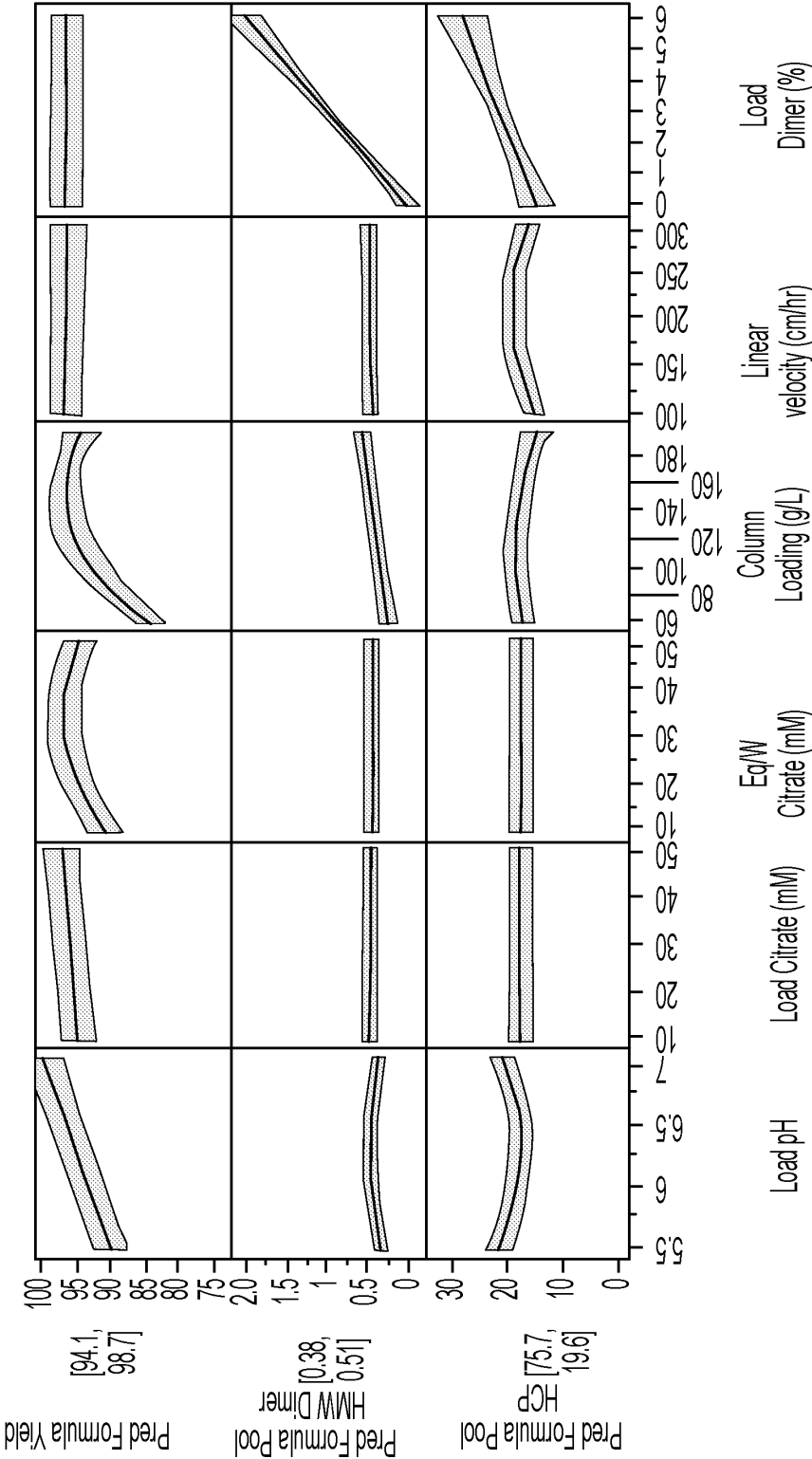


FIG. 38



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

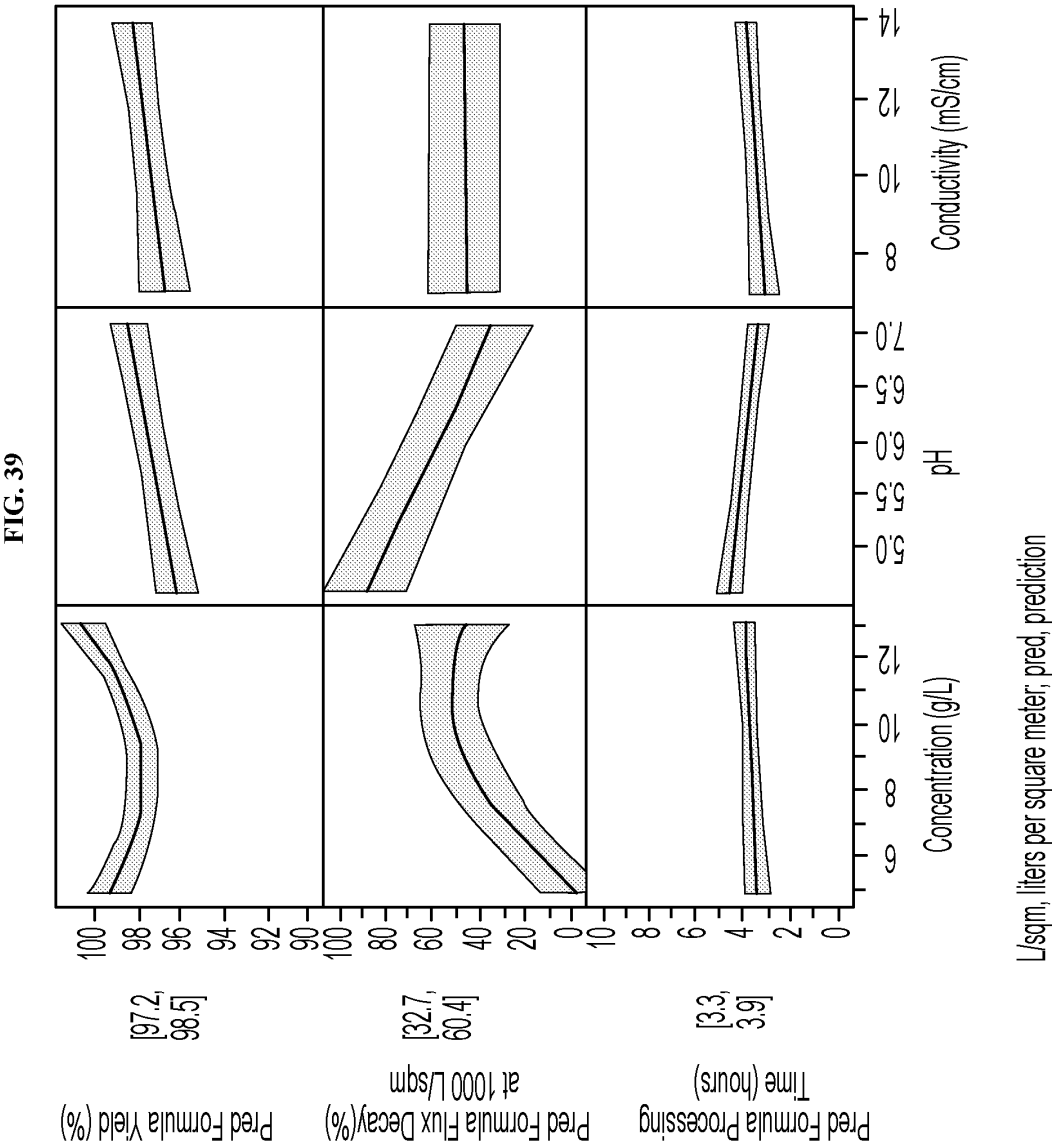


FIG. 40

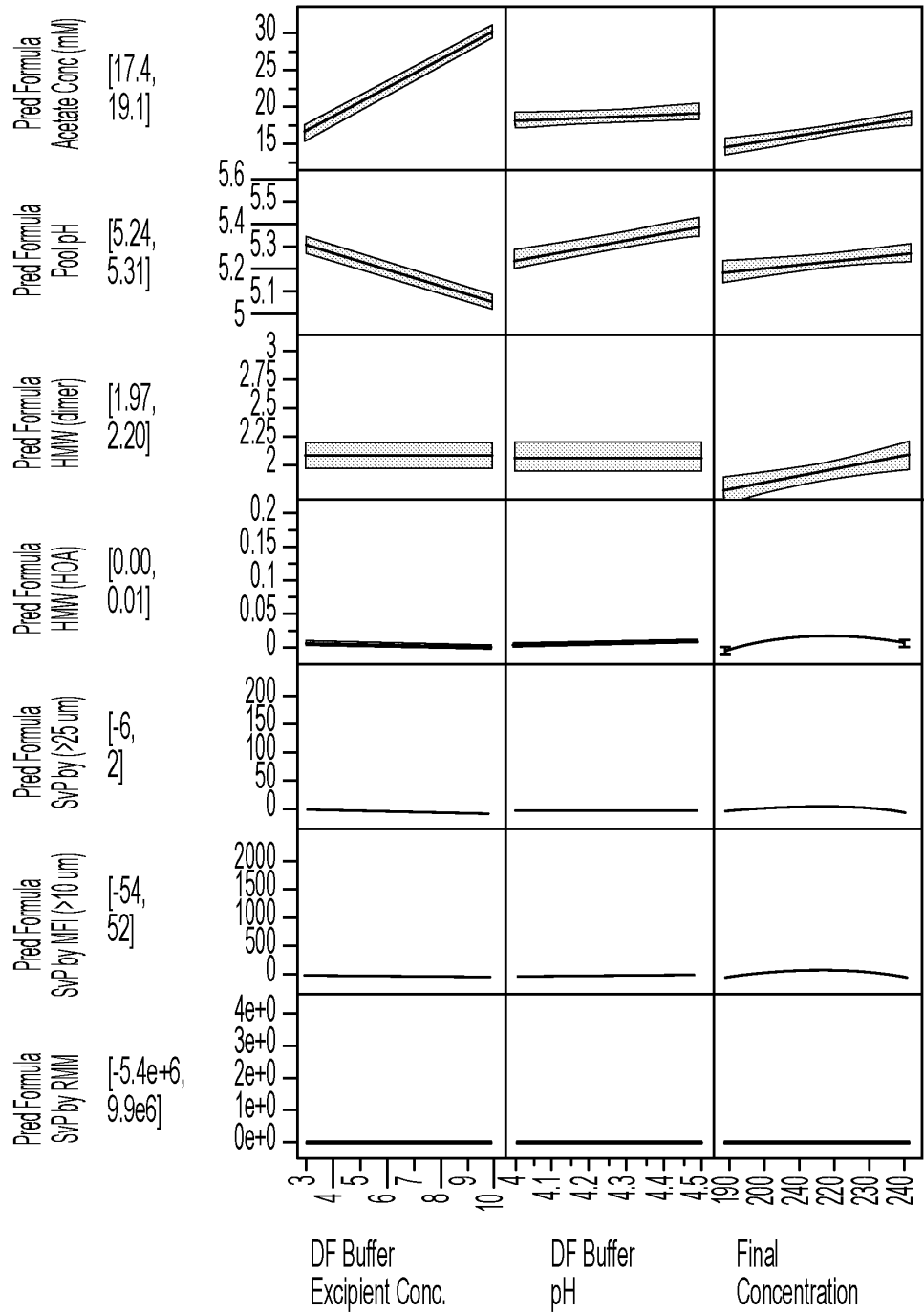
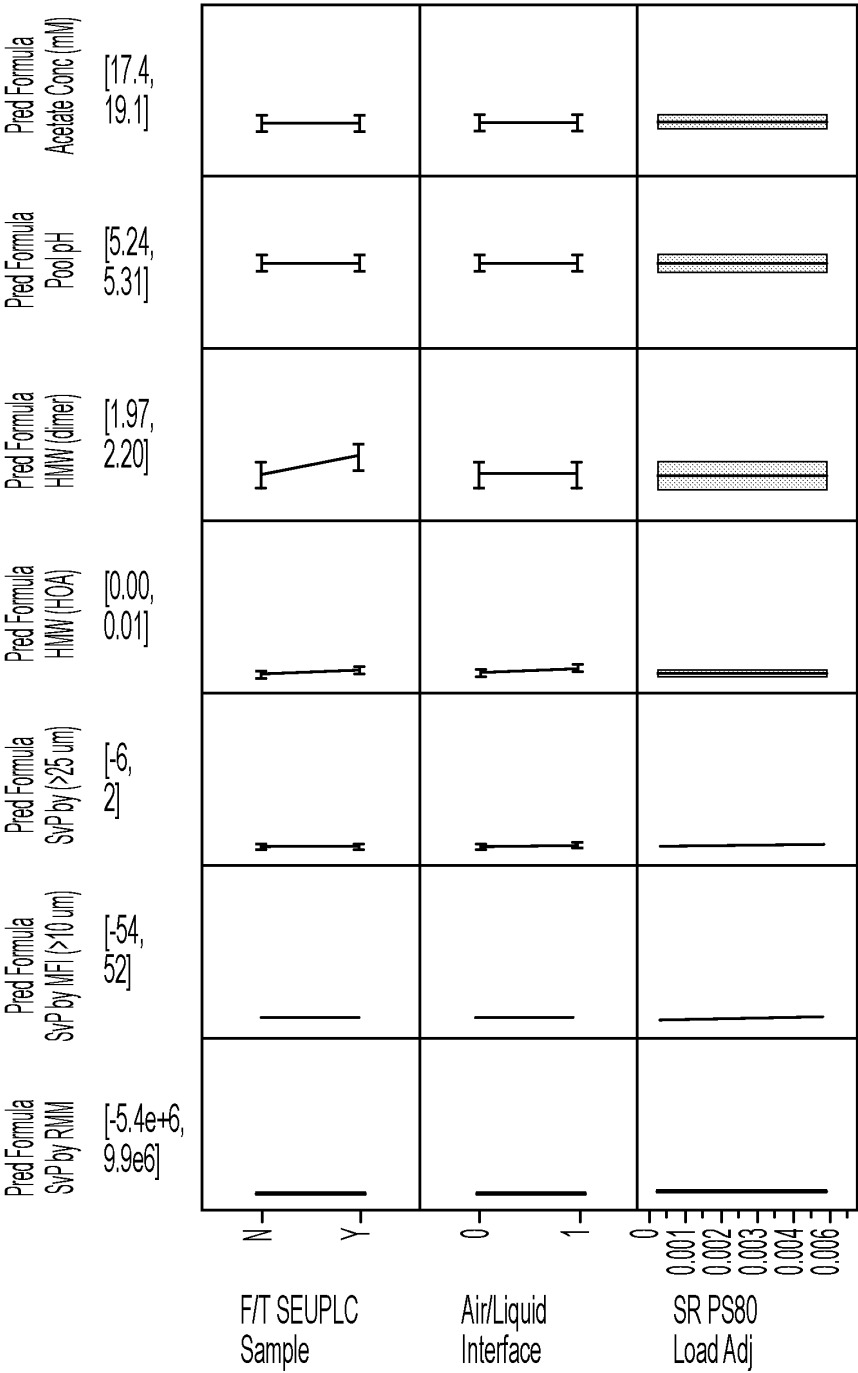
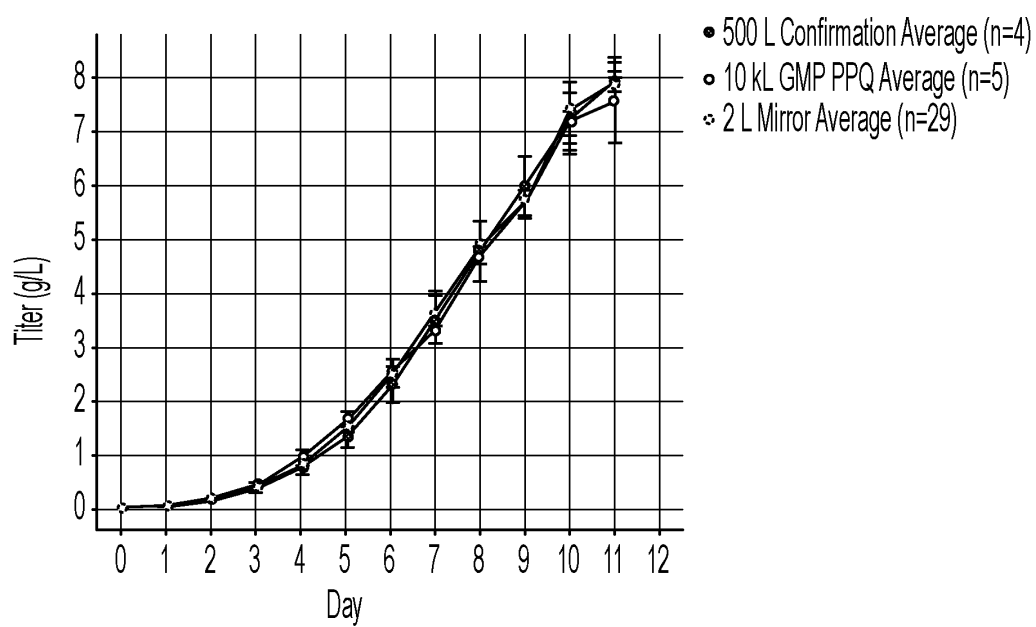


FIG. 40 continued



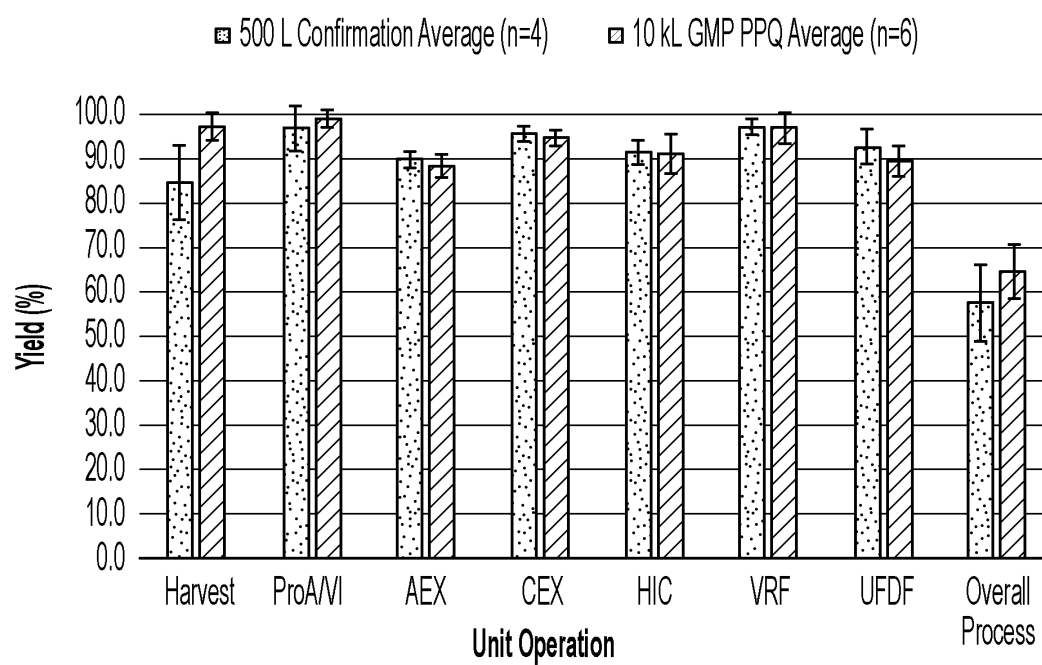
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FIG. 41



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FIG. 42



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FIG. 43

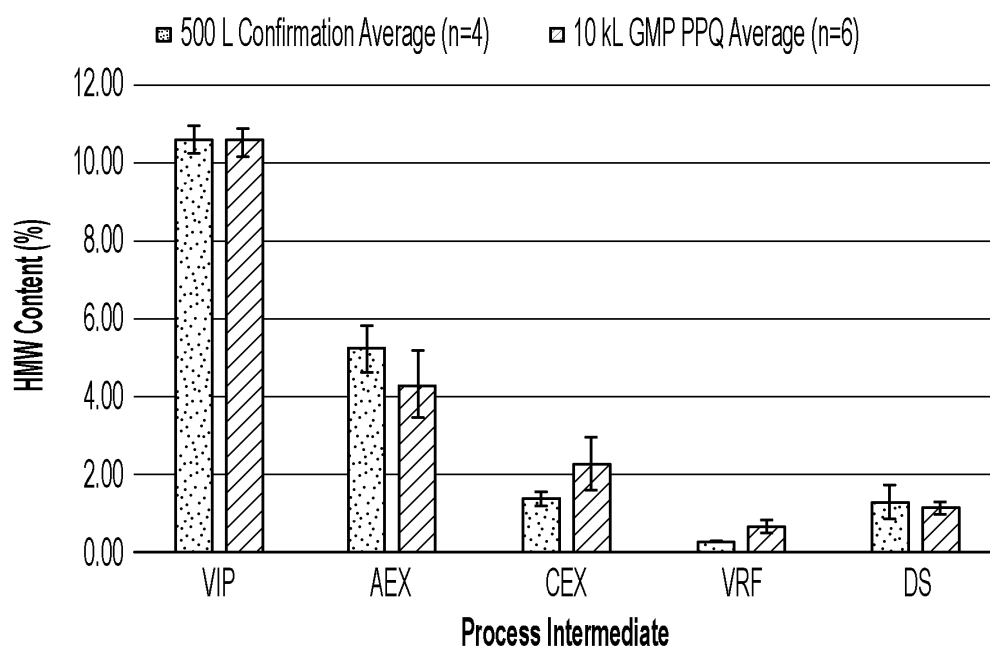


FIG. 44

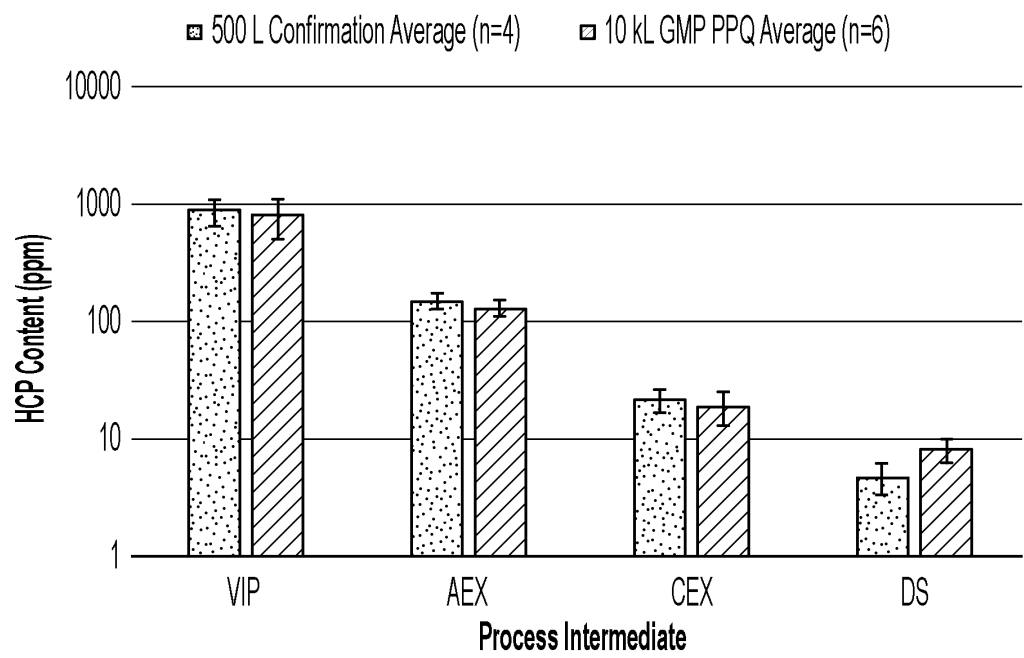


FIG. 45

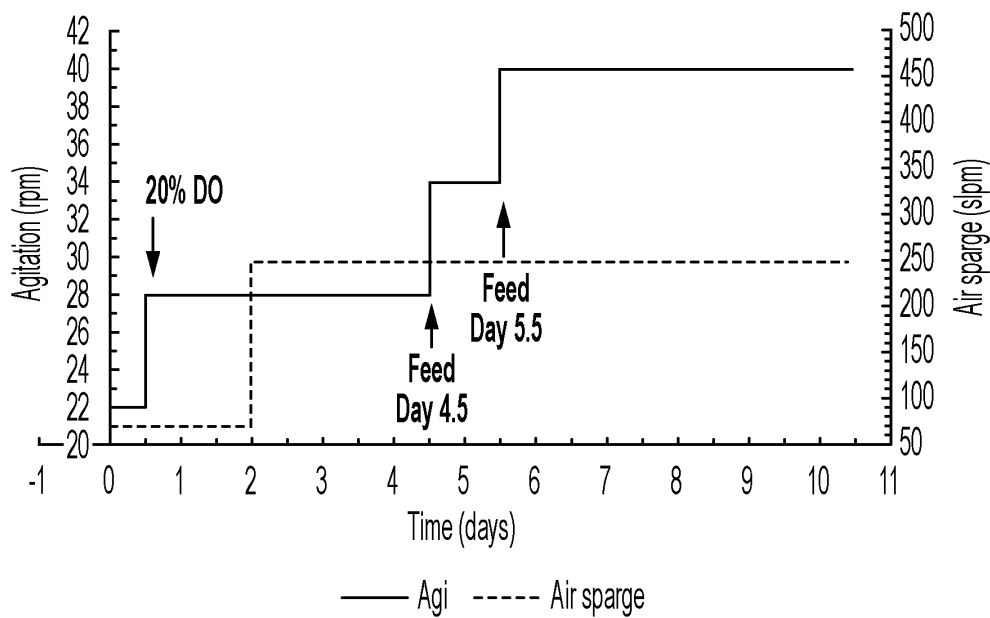


FIG. 46

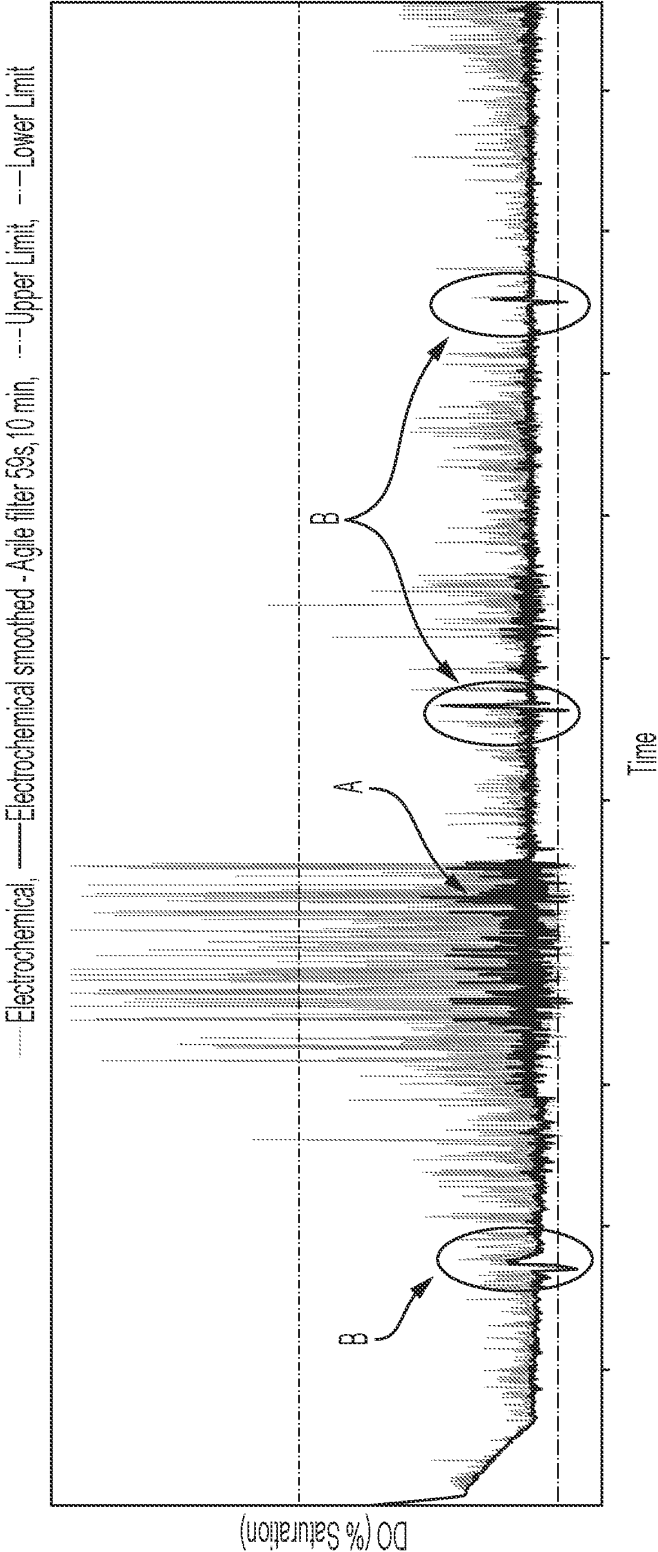


FIG. 47

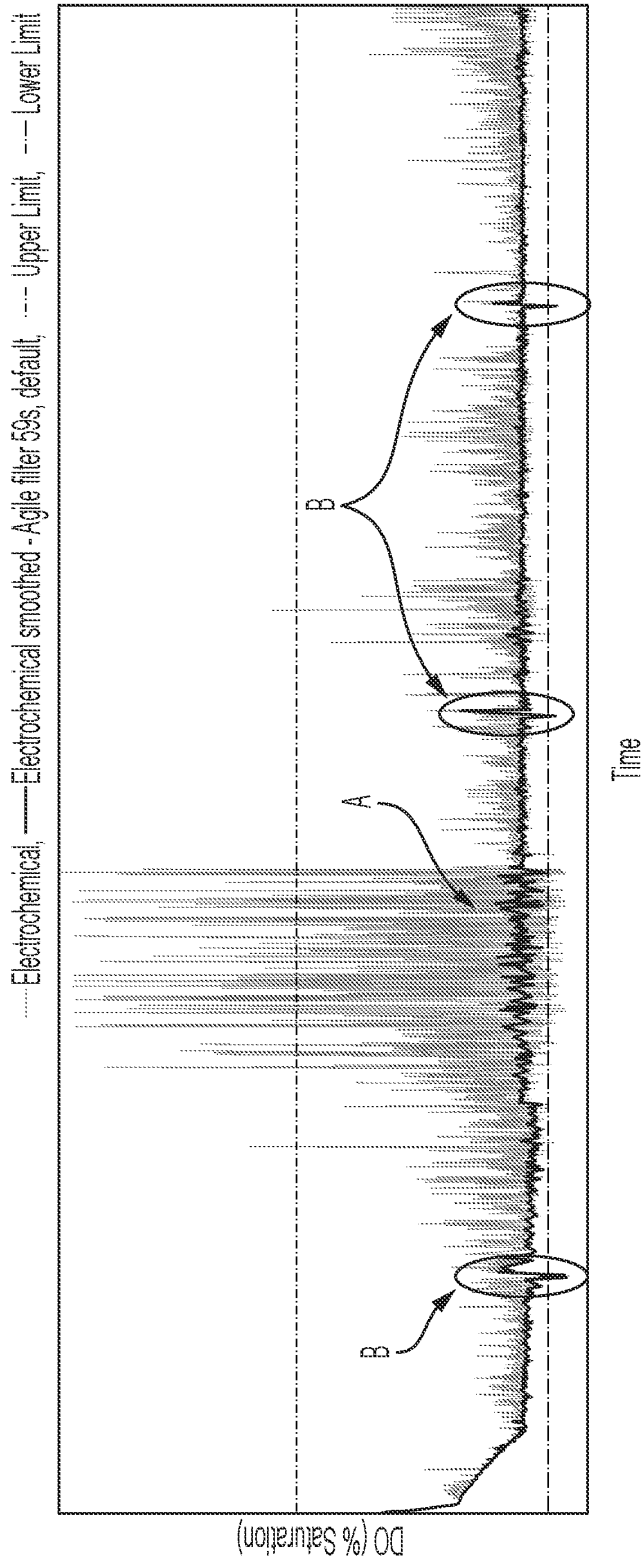


FIG. 48

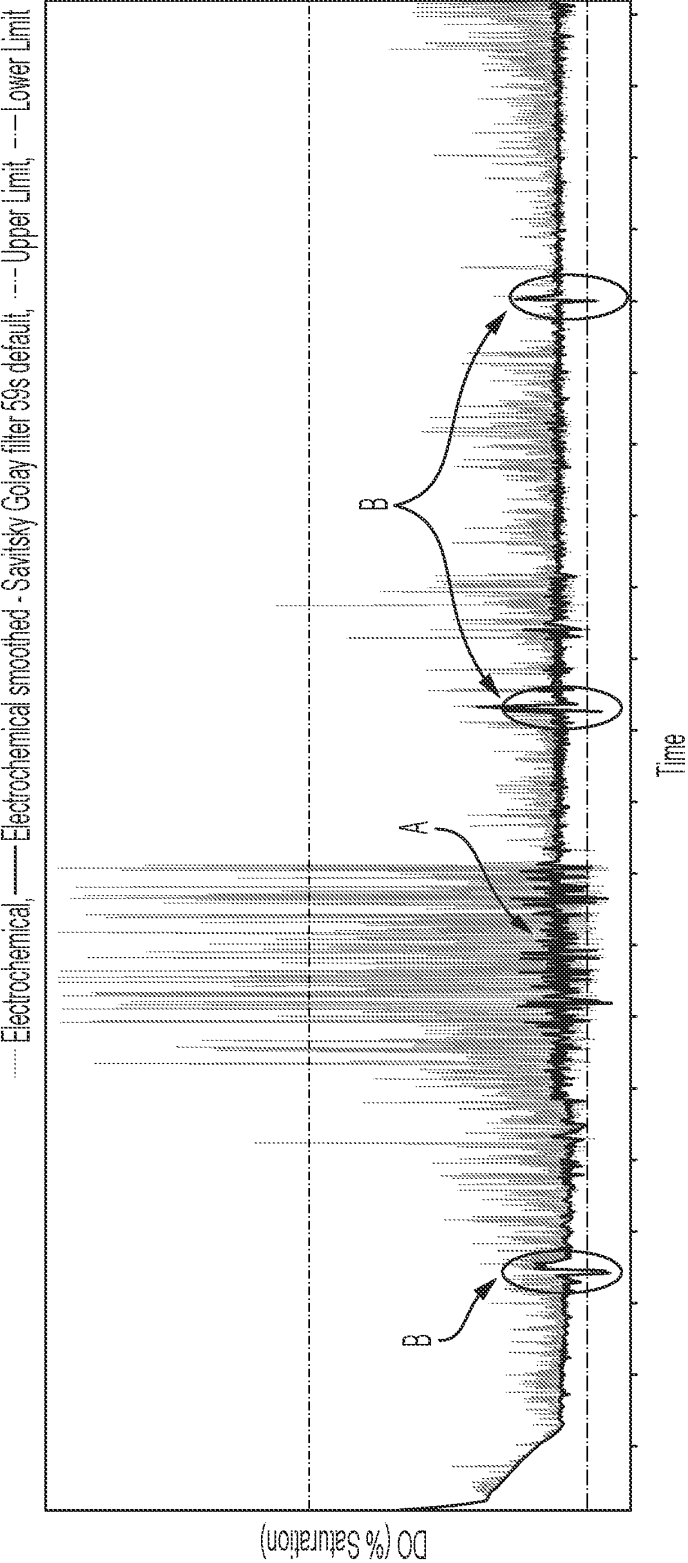


FIG. 49

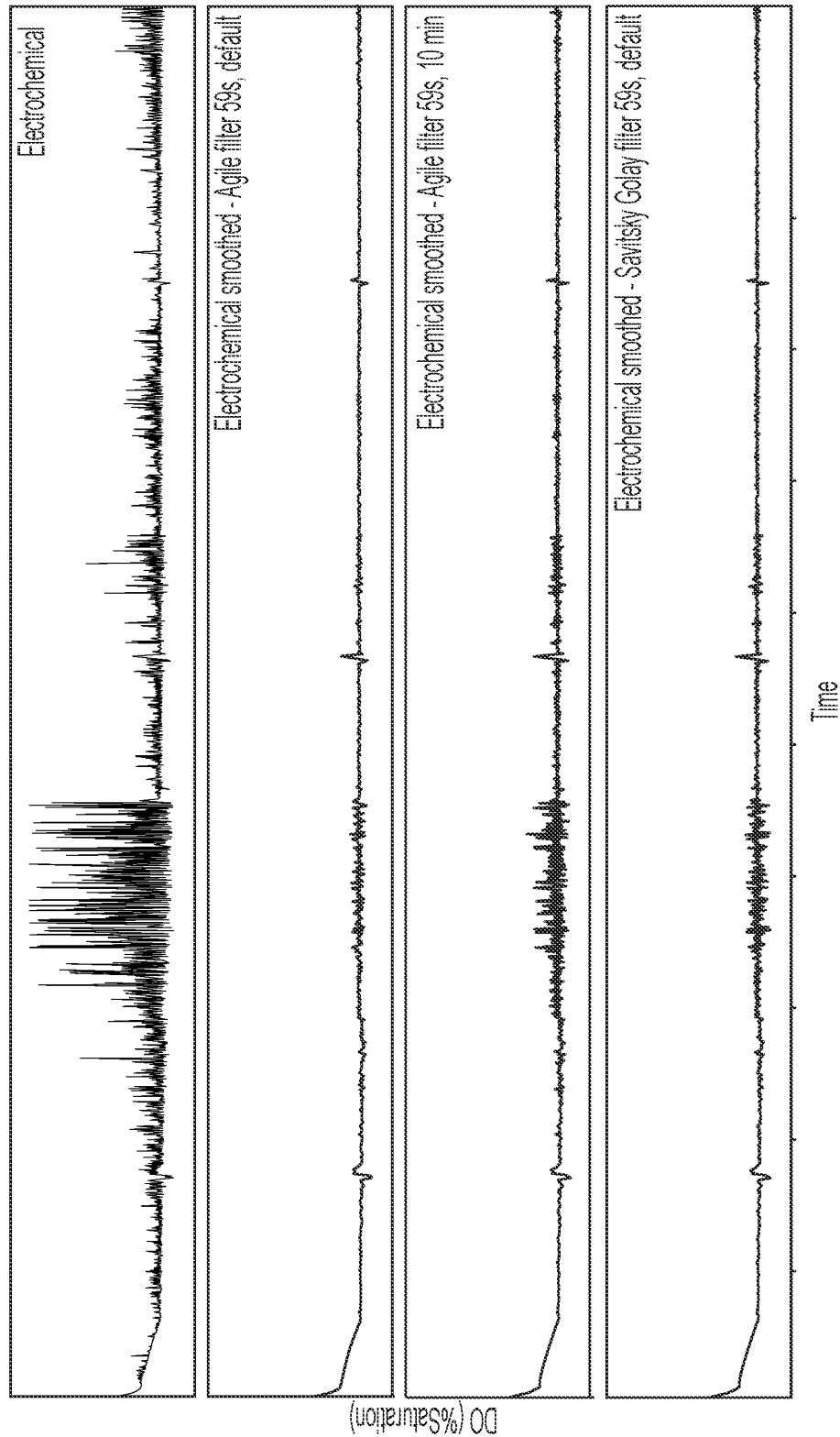


FIG. 50

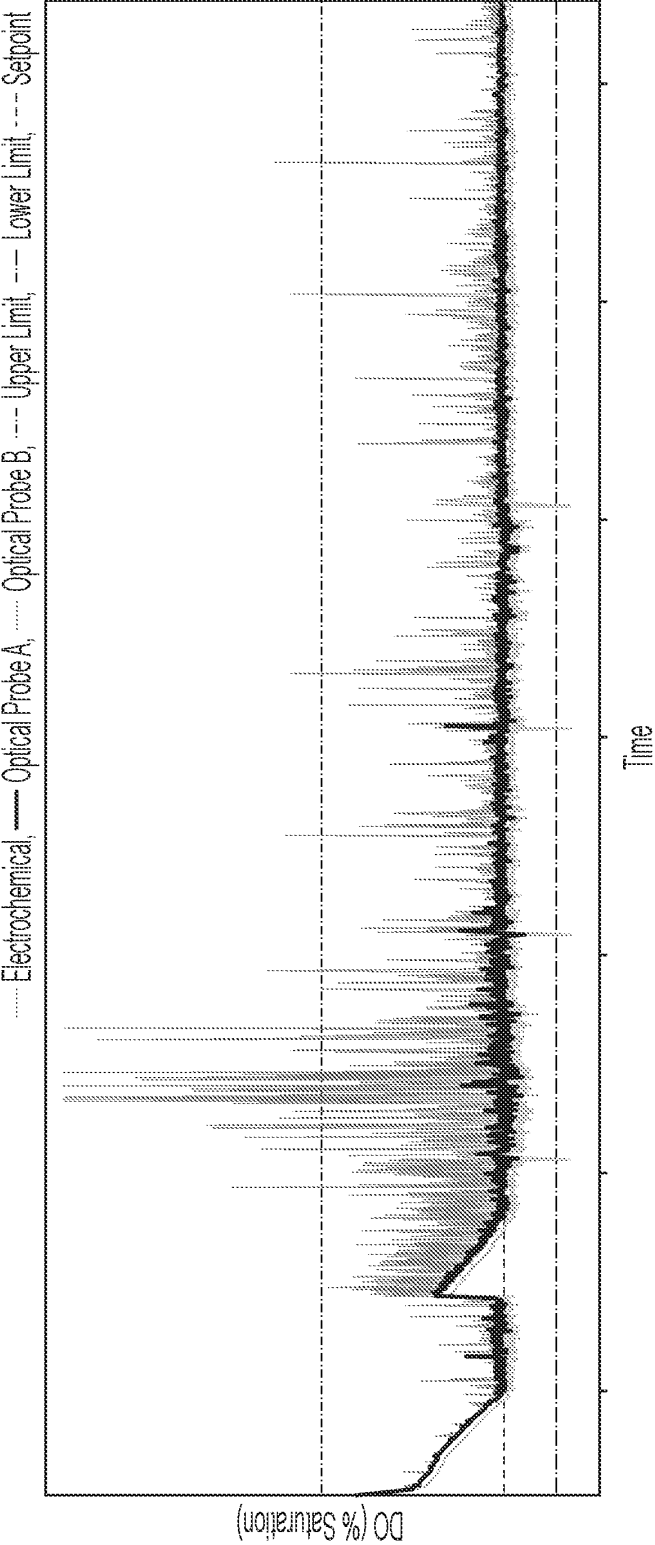


FIG. 51

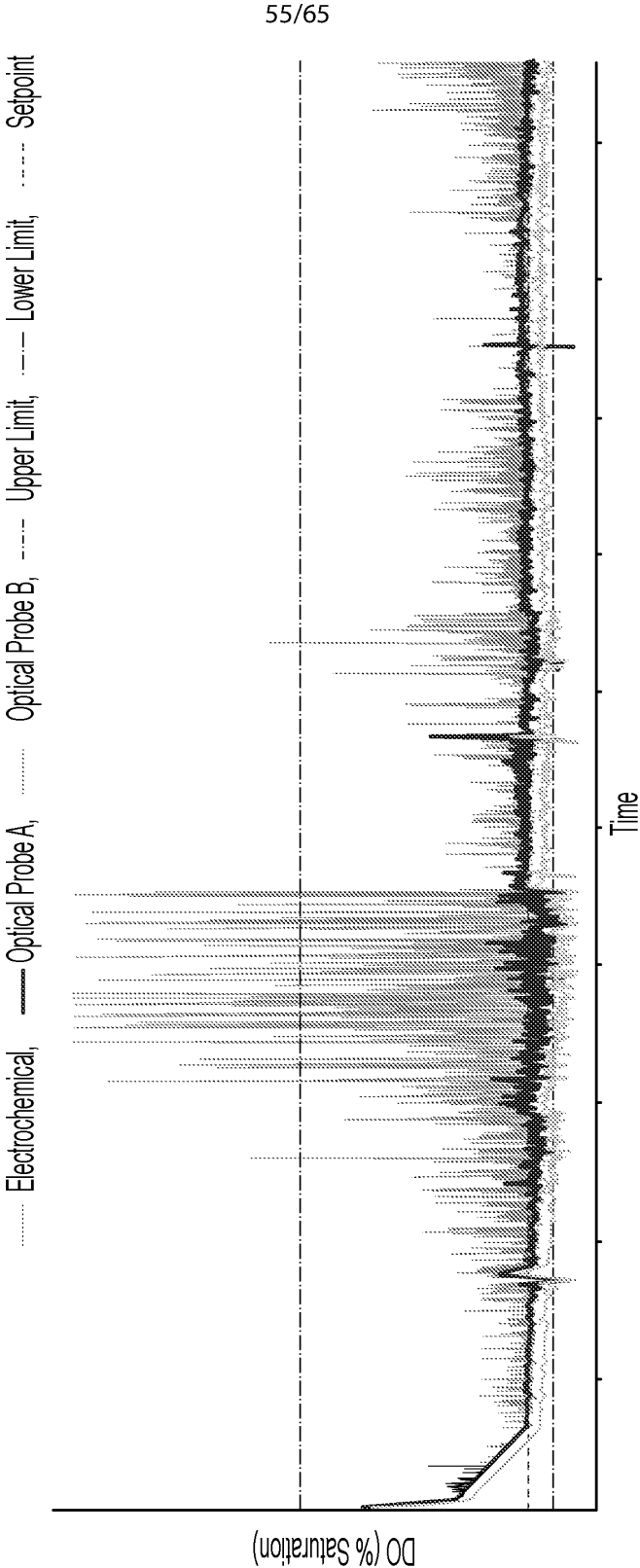


FIG. 52

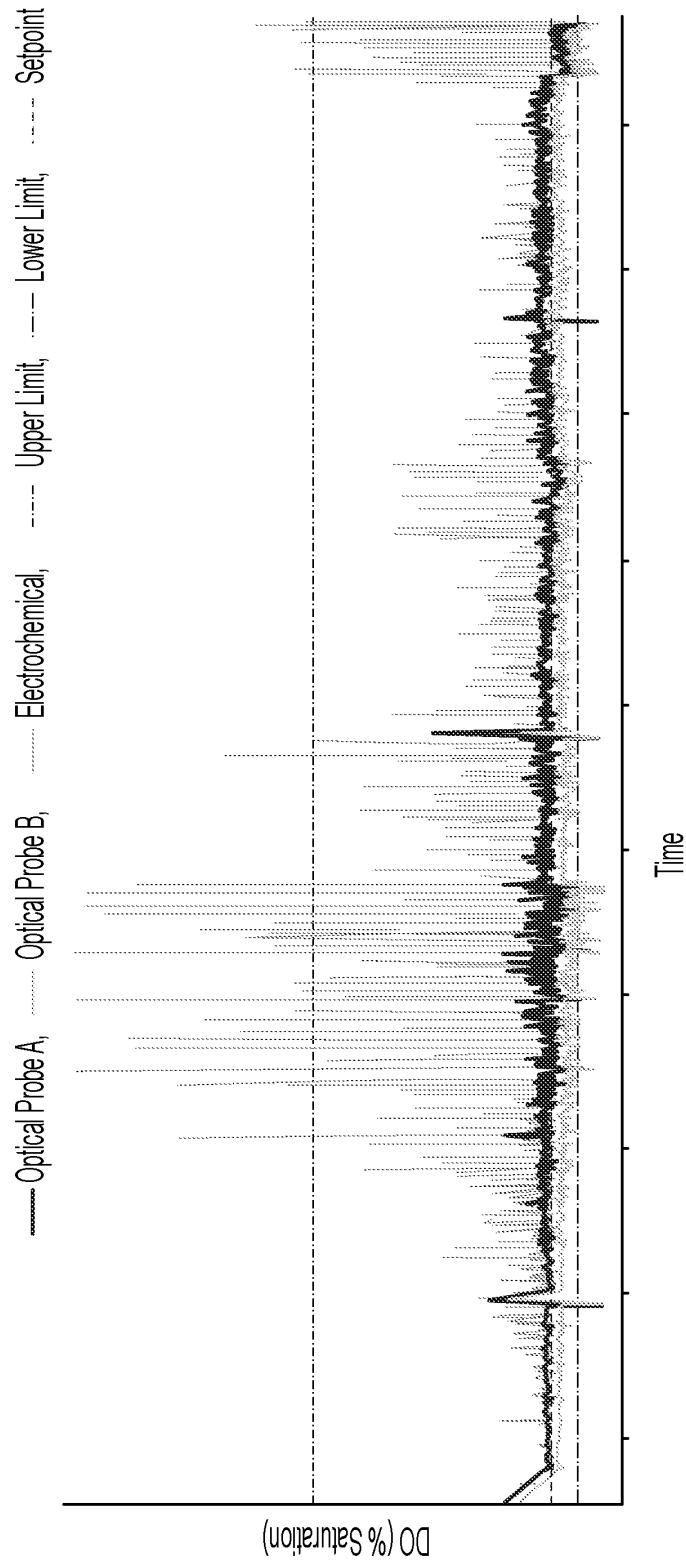


FIG. 53

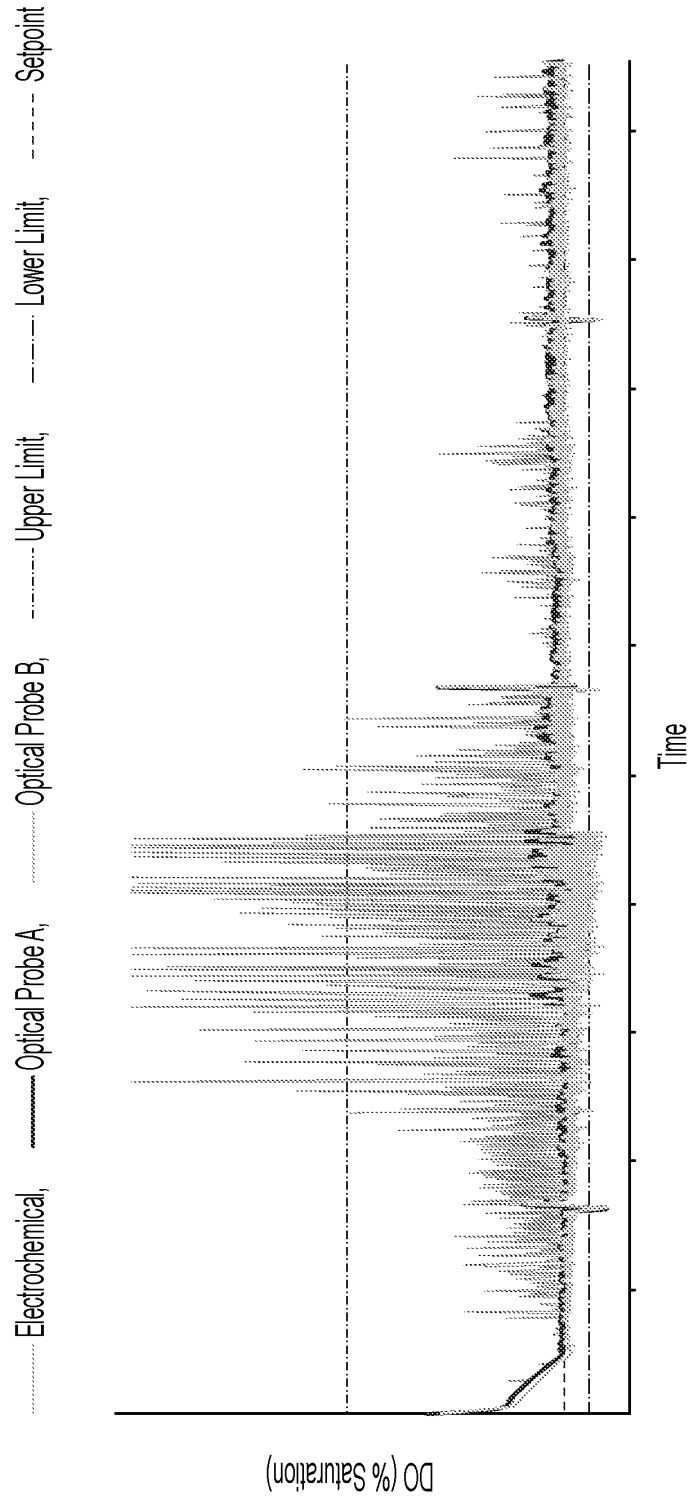


FIG. 54

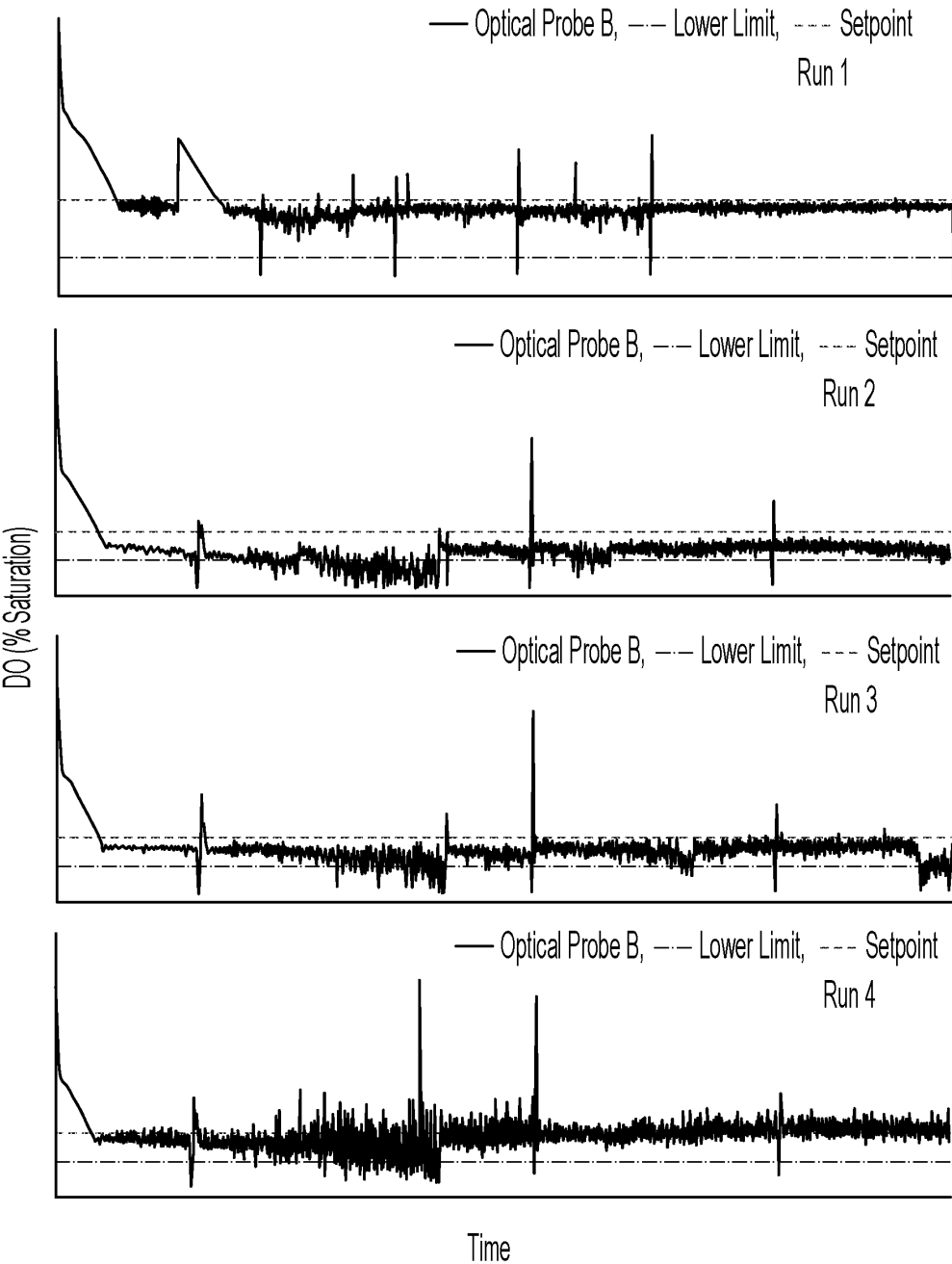


FIG. 55

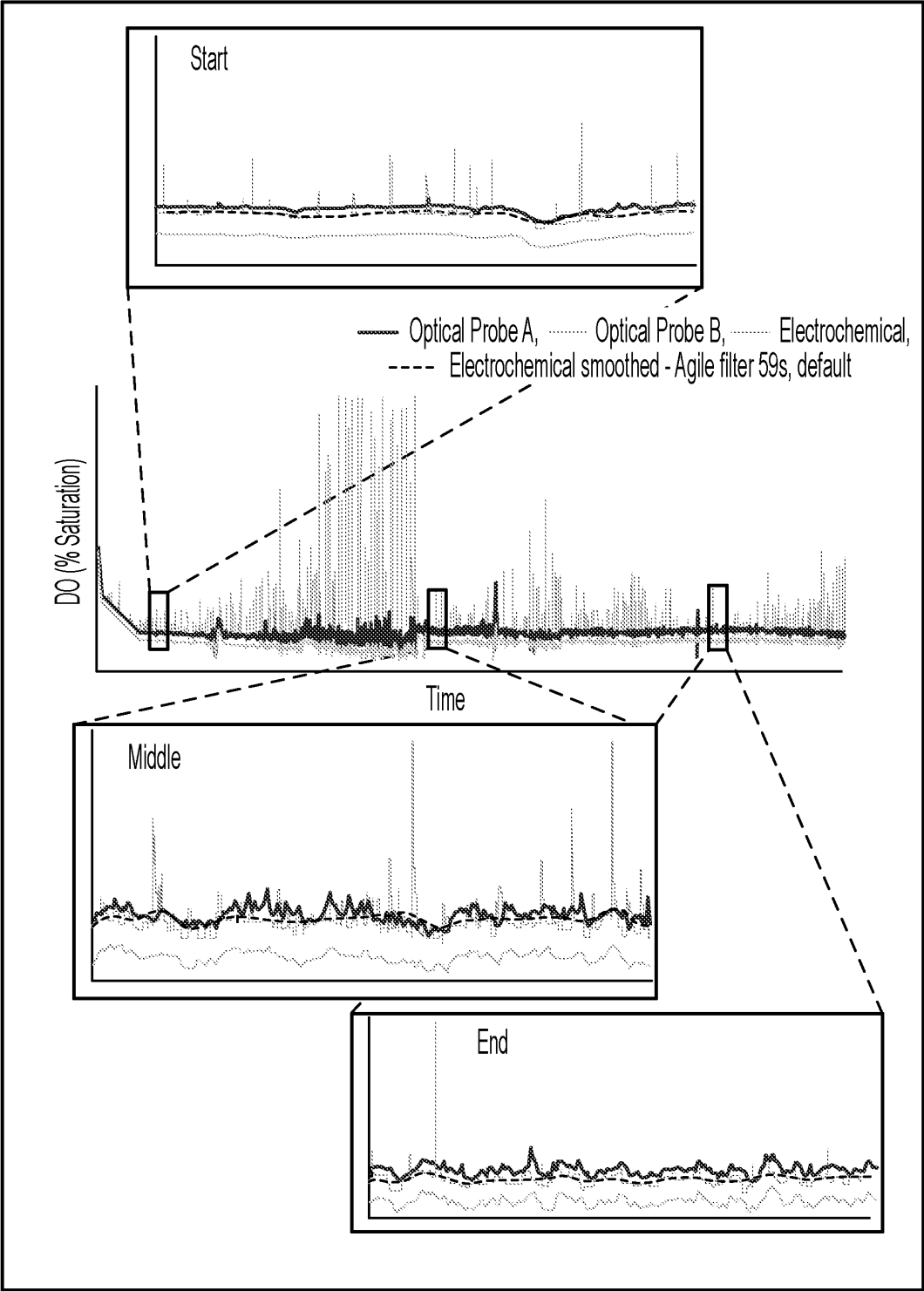


FIG. 56

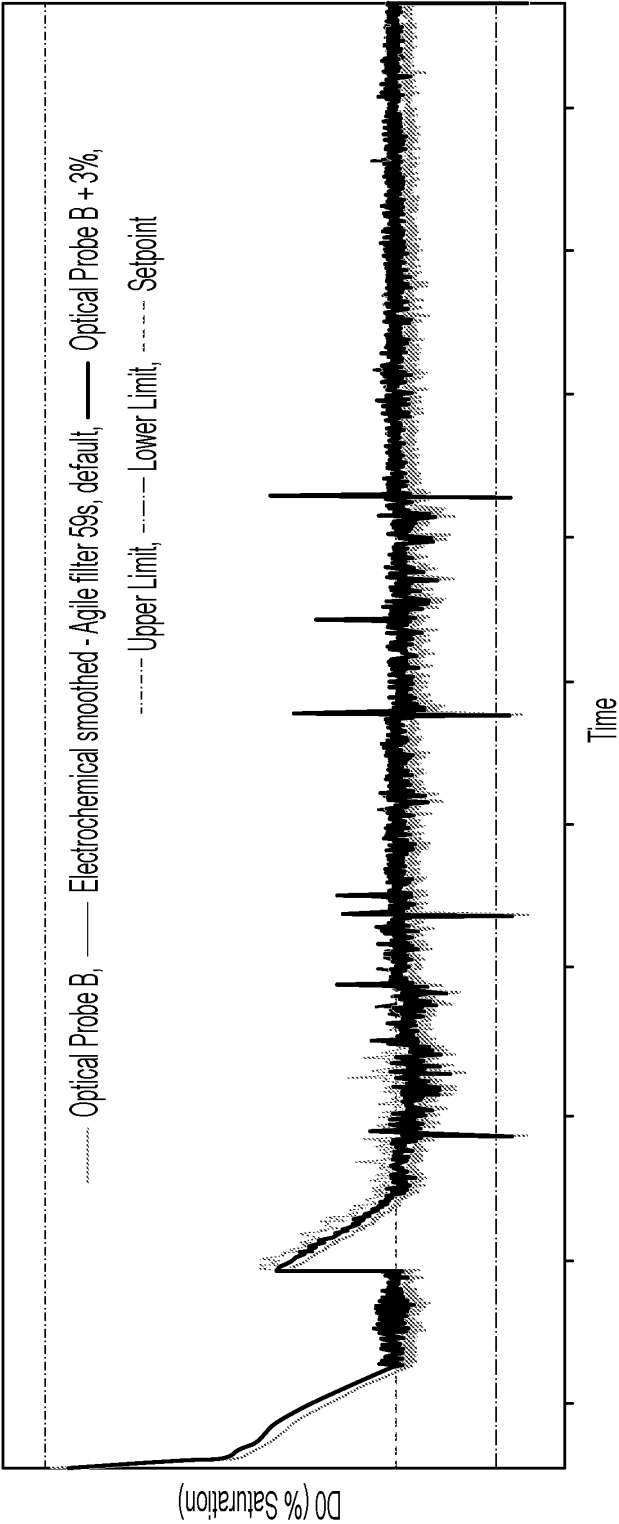


FIG. 57

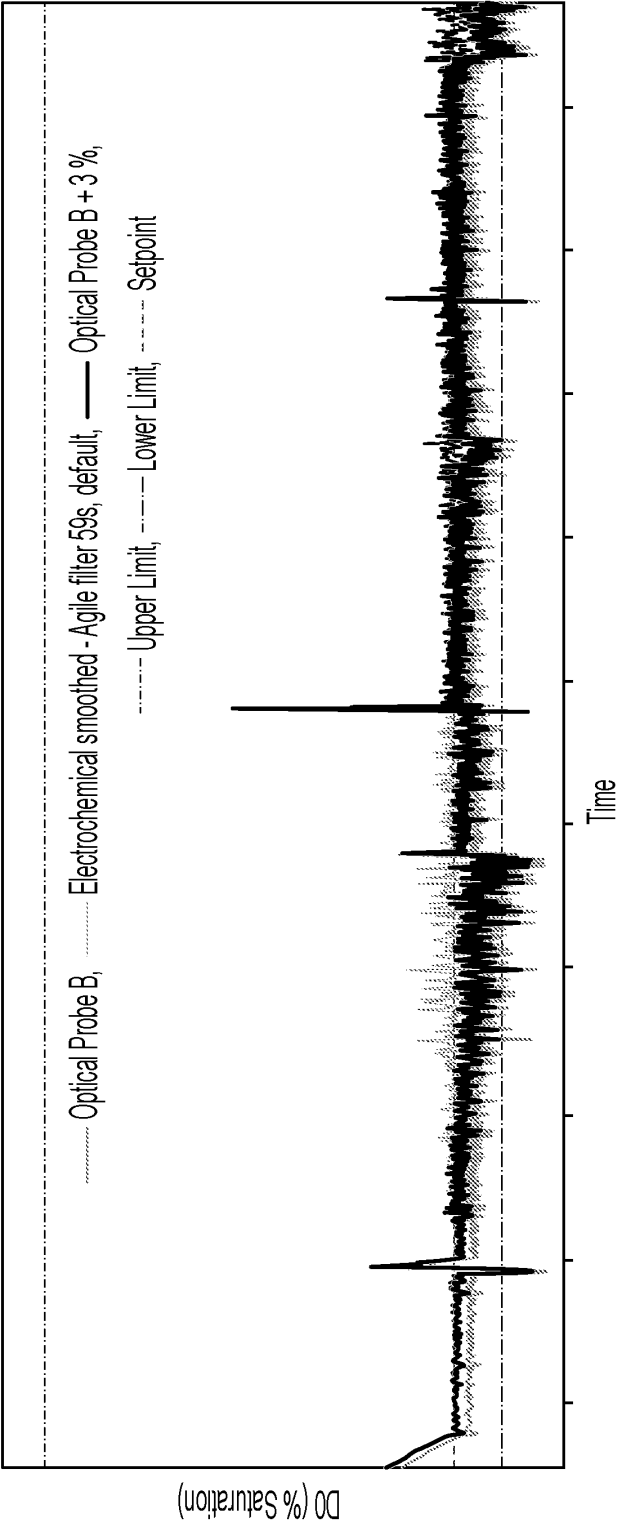


FIG. 58B

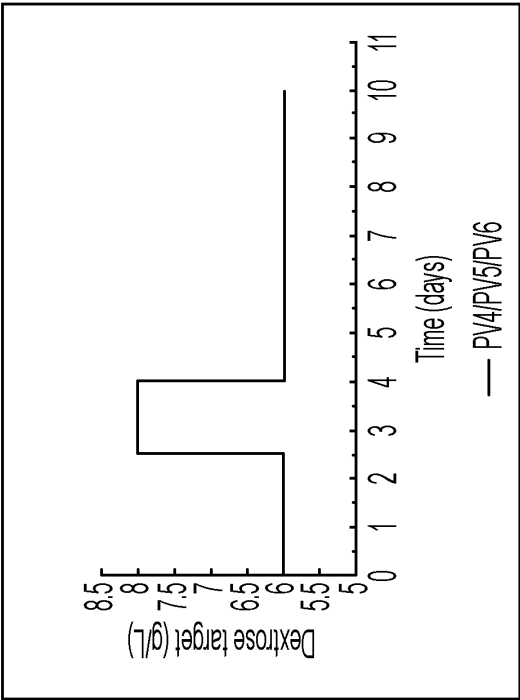
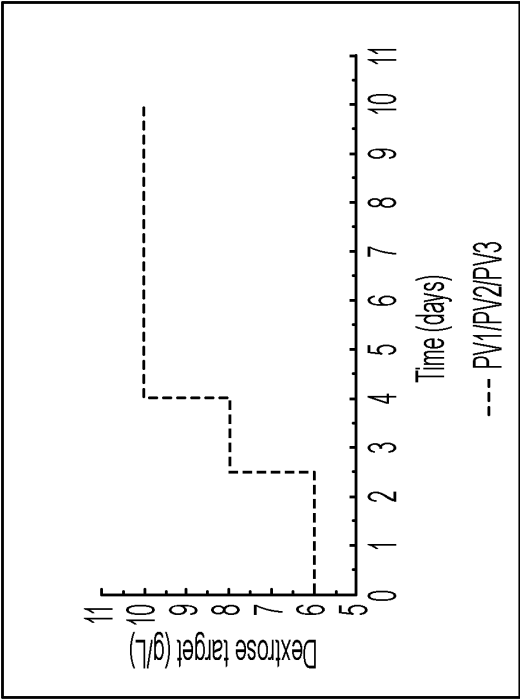


FIG. 58A



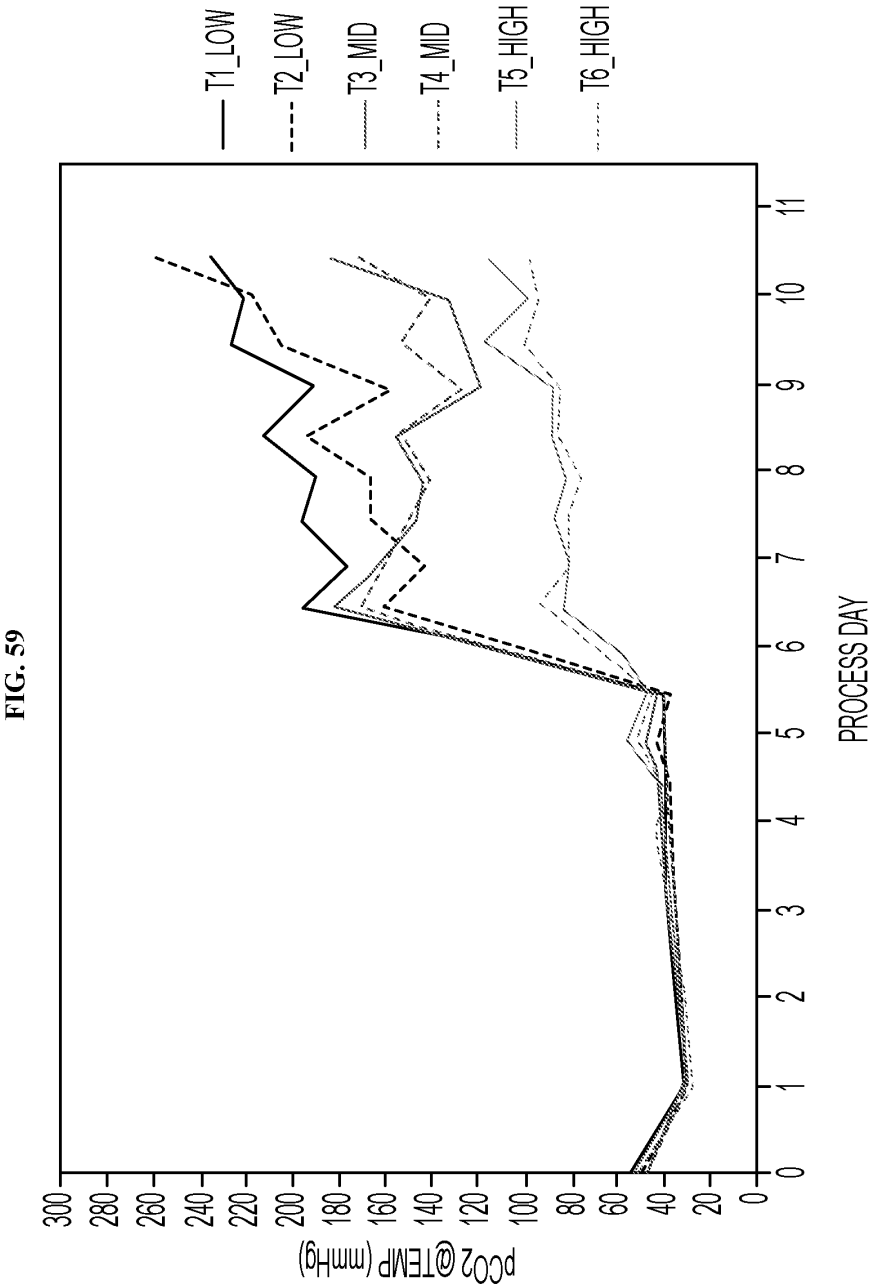


FIG. 60

