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[Continued on next page]

(54) Title: HIGH THROUGHPUT EXPERIMENTATION METHODS FOR PHASE SEPARATION

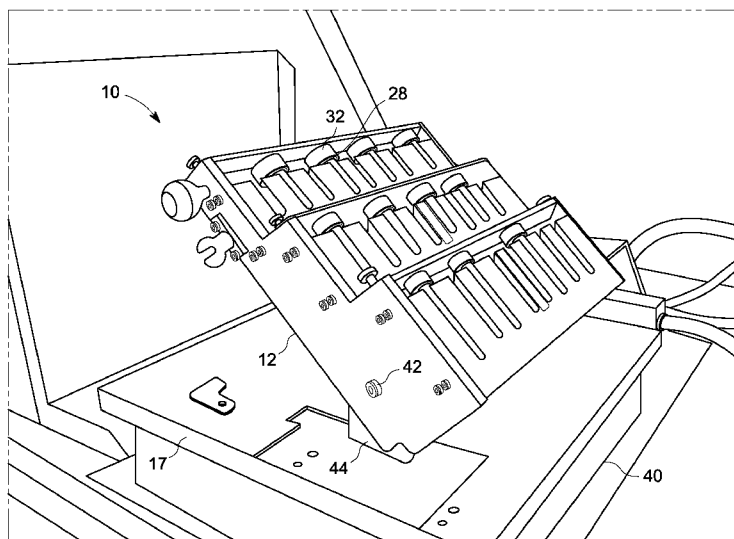


FIG. 2

(57) Abstract: A process for testing the effectiveness of demulsifying additives on oil/water emulsions includes adding samples containing differing combinations of oil, water and demulsifier to a plurality of elongate reactor vials, wherein each the elongate reactor vial has a longitudinal axis extending from its bottom to its rim. The plurality of reactor vials are placed into a reaction block mounted on a platform of a shaker, wherein the reactor vials are received in stations of the reaction block in a vertical orientation such that the longitudinal axis of each reactor vial is perpendicular to the platform. The reaction block is pivoted so that the longitudinal axis of each reactor vial is parallel with the platform in a horizontal orientation. The method further includes agitating the reactor vials with the shaker to simultaneously form an oil/water emulsion in each reactor vial while the reactor vials are in the horizontal orientation and then pivoting the reaction block to return the reactor vials to a vertical orientation. The demulsification of the oil/water emulsion in the plurality of reactor vials is

observed with the reactor vials in the vertical orientation. In one embodiment, the method further includes using an imaging device to record the demulsification of the oil/water emulsion.



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