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(54) **SELECTION OF COMPARTMENTALIZED SCREENING METHOD**

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CPC C12Q 1/686; C12Q 2565/629; C12Q 2527/125; C12Q 2563/159; C12Q 1/6869; C12Q 2547/101; C12Q 1/6844; C12Q 1/6806; C12Q 2563/149; C12Q 2531/113; C12Q 1/6834; C12Q 2537/149; C12Q 1/00; C12Q 2565/607; C12Q 1/68; C12Q 1/6809; C12Q 2563/185; C12Q 1/6816; B01L 2300/0867; B01L 3/502784; B01L 3/502715; B01L 2200/0647; B01L 3/5027; B01L 2200/027; B01L 2300/0819; B01L 2300/0877; B01L 9/527; C12N 15/1068; C12N 15/1093; C12N 15/10; B01J 19/0046; B01J 19/0093; B01J 2219/00722; B01J 2219/00702; G01N 21/6428; G01N 21/6458; G01N 1/64; G01N 27/3275; C12P 21/00; G06F 19/22; C40B 40/06; C40B 40/10; C40B 60/14; C40B 30/04; C40B 40/04; C40B 50/08; C40B 60/08; C40B 60/12; C40B 70/00; C07K 1/047
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See application file for complete search history.

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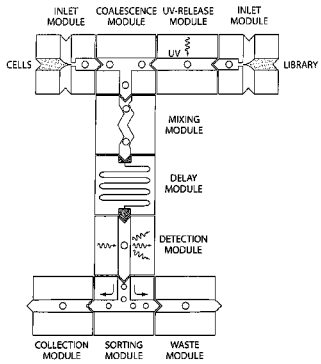
(57) **ABSTRACT**

The present invention provides novel microfluidic substrates and methods that are useful for performing biological, chemical and diagnostic assays. The substrates can include a plurality of electrically addressable, channel bearing fluidic modules integrally arranged such that a continuous channel is provided for flow of immiscible fluids.

23 Claims, 36 Drawing Sheets