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[Continued on next page]

(54) **Title:** METHODS AND COMPOSITIONS FOR HIGHLY SPECIFIC CAPTURE AND RELEASE OF BIOLOGICAL MATERIALS

FIG. 4a

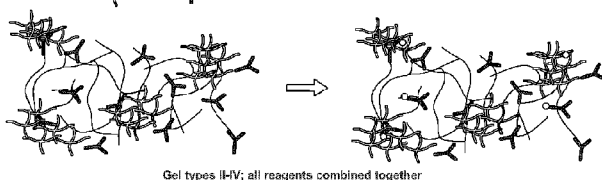


FIG. 4b

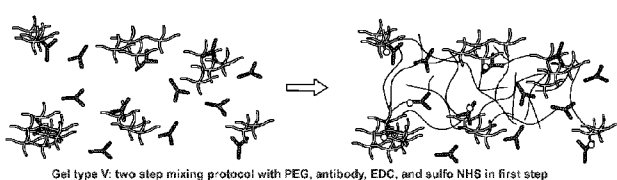
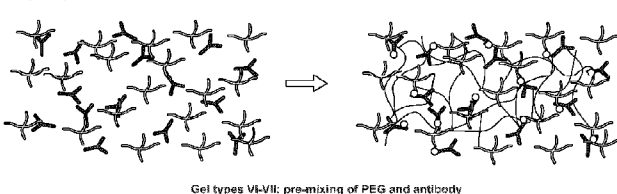


FIG. 4c



(57) **Abstract:** Disclosed herein are hydrogel compositions and methods of making hydrogel compositions. Furthermore, methods of specifically capturing and releasing biological materials from a sample using the disclosed hydrogel compositions are disclosed, including methods of utilizing the compositions in microfluidic devices.



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