

What is claimed is:

Claim 1. A method, comprising:

introducing biotinylated library fragments to a flow cell, wherein the
5 biotinylated library fragments are attached to streptavidin coated solid
supports through a biotin-streptavidin bond;

introducing a biotin-streptavidin cleavage composition to the flow cell,
the biotin-streptavidin cleavage composition including:

from 10% by volume to 50% by volume of a formamide reagent;
10 and
a balance of a salt buffer; and

allowing the biotin-streptavidin cleavage composition to incubate in the
flow cell at a temperature ranging from 60°C to 70°C, thereby causing at least
some of the library fragments to release from the solid supports and to seed to
15 amplification primers on a surface of the flow cell.

Claim 2. The method as defined in claim 1, wherein the biotin-
streptavidin cleavage composition is allowed to incubate in the flow cell for a
time ranging from 2 minutes to 5 minutes.

Claim 3. The method as defined in claim 1 or 2, wherein:

20 at least some of the streptavidin coated solid supports become bound
to biotin capture sites on a surface of the flow cell; and

the allowing of the biotin-streptavidin cleavage composition to incubate
in the flow cell also causes at least some of the bound streptavidin coated
solid supports to release from the biotin capture sites.

25 Claim 4. The method as defined in claim 3, further comprising rinsing
the biotin-streptavidin cleavage composition from the flow cell after incubation,
thereby removing the streptavidin coated solid supports and any unseeded
library fragments.

Claim 5. The method as defined in one of claims 1 through 4, further comprising preparing the biotin-streptavidin cleavage composition by mixing the formamide reagent and the salt buffer.

5 Claim 6. The method as defined in claim 5, wherein the formamide reagent is 100% formamide.

Claim 7. The method as defined in claim 5 or 6, wherein the salt buffer includes about 0.75 M sodium chloride and about 75 mM sodium citrate in water.

10 Claim 8. The method as defined in one of claims 5 through 7, wherein the salt buffer further includes from 0.25 wt% to 1 .5 wt% of a biocompatible surfactant.