

## DNA microarray on dendrimer-coated glass surface

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DNA microarray is often used for finding diseases or bacteria. The sensitivity and selectivity of DNA microarray are two important factors in its performance. To improve these factors, we use a PAMAM dendrimer. The end group of dendrimer was modified by biotin and then avidin is added. The dendrimer-avidin complex is coated on biotin-modified glass slide. Then biotin-labeled probe DNA is immobilized on top of dendrimer by biotin-avidin reaction. Because of the wider surface area, more probe DNA is attached to the surface, so that sensitivity of DNA microarray is greatly increased. We compared the surface morphology of dendrimer complex with SEM while changing avidin and biotin concentrations. With morphological study, the amounts of biotin and avidin is optimized to increase the sensitivity of DNA microarray.