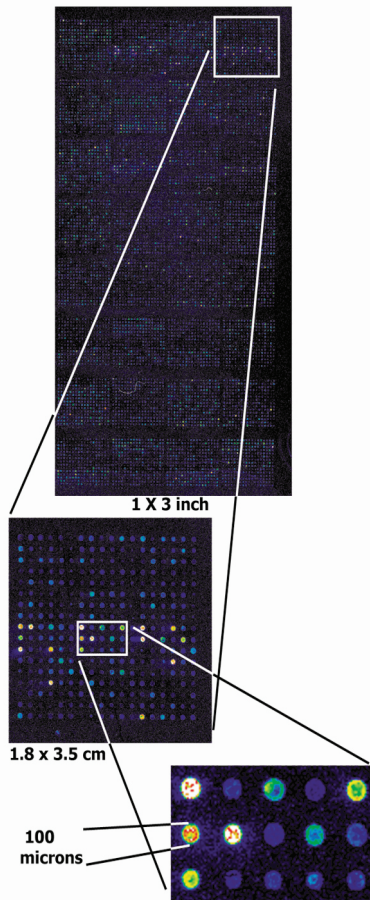


Microarray Platform Information

(E.coli example)

Microarray technology has revolutionized life-science research. Ten years ago one could study 5 to 10 genes per experiment. Today, thanks to microarray technology, one can study thousands of genes in a single experiment!

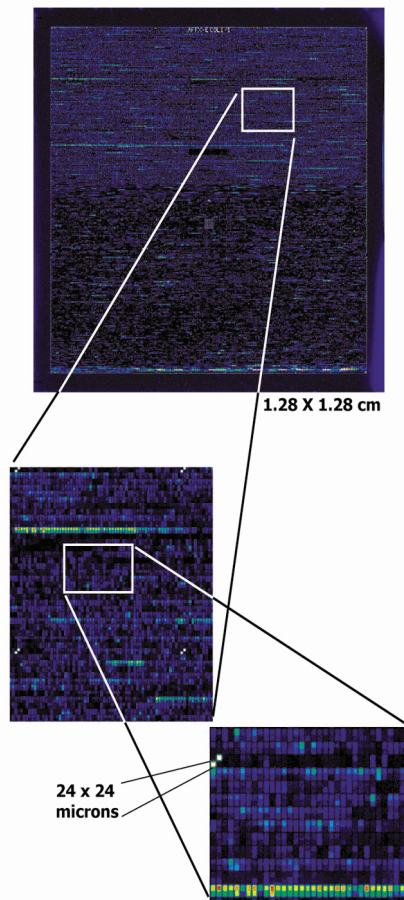
Spotted Microarray



Spotted microarrays use an automated high precision robot to deposit DNA onto a standard microscope (1"x3") slide. DNA deposited on the array must be prepared and archived. Making these arrays is time-consuming and expensive due in part to the large material libraries that must be maintained and archived.

- More than 4,200 genes plus controls represented as double stranded DNA
- 9,312 spots, which includes controls

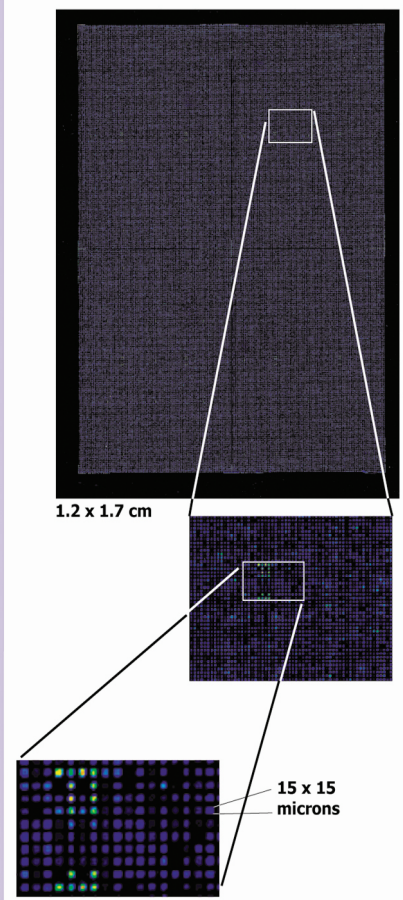
Affymetrix GeneChip®



Affymetrix GeneChips® combine photo masks and combinatorial chemistry. Masks expose selected portions on the array to light and the chemistry allows DNA to attach where the light hits. A specific set of DNA probes is attached, with each probe type in a known location. This time-consuming and expensive, which makes "custom" arrays prohibitively expensive.

- More than 4,200 genes as 25 base pair single stranded DNA.
- 262,000 locations, including controls

NimbleGen Array



NimbleGen uses Maskless Array Technology (MAS), a digital micromirror device (DMD). It's an array of 786,000 tiny aluminum mirrors, arranged on a computer chip. Each mirror is individually aimable. Shining light in specific patterns, along with photo deposition chemistry, puts DNA at known locations. The computer-controlled micromirror method allows custom chips at relatively low cost.

- More than 4,200 transcripts as 24 base pair single stranded DNA
- 195,000 features total