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(54) Title: DIRECT DETECTION METHOD FOR PRODUCTS OF CELLULAR METABOLISM USING TOF-SIMS

(57) Abstract: A rapid and efficient method for novel biological substance screening by surface analysis has been developed using Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS). This method relies on the surface screening of an array of micro-organisms grown on porous membranes, which had previously been in contact with a solid growth medium. ToF-SIMS analysis differentiates among organisms producing different substances, either directly as molecular product, or indirectly through the use of multivariate statistical data reduction techniques. This method has many advantages over traditional microbial screening methods, which require sample preparation and time for assay development.



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