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Author <b>Ronnie Jansson</b>		
Title (English) <b>Development of a solid-phase padlock probe technology using microfluidics</b>		
Title (Swedish)		
Abstract The padlock probe technology is a DNA analysis tool with biological applications such as DNA analysis <i>in situ</i> , detection of single-nucleotide polymorphisms, DNA analysis in parallel and microbial detection. Briefly, the method utilizes short oligonucleotide probes, so-called padlock probes, for a highly specific dual-recognition event of a particular target sequence, followed by ligase-mediated circularization of the padlock probes. In the present work the padlock probe method, using microbial detection as a model system, has been combined with solid-phase and microfluidics to make the padlock probe hybridization and circularization procedure more efficient in terms of increased sensitivity, as well as decreased analysis time. To achieve this, the idea is to capture fragmented microbial DNA on beads trapped inside a microfluidic column, followed by padlock probe hybridization and circularization.		
Keywords Padlock probe, circularization, solid phase, microfluidics, microbial detection		
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