

## Device for sample purification by paramagnetic beads (P-1170)

### Keywords

- High-throughput purification of nucleic acids or proteins using paramagnetic beads
- Mixing of the samples by consecutive activation of electromagnets surrounding the wells
- Enabling the construction of an *All-In-One Cycler* for the preparation of sequencing libraries

### Abstract

The use of paramagnetic beads (e.g. Ampure® or Dyna®) is a standard procedure for the purification of nucleic acids and proteins, especially in high throughput approaches using liquid-handling robots. Here we present the idea for a new device that enables bead purification and mixing of the sample without the need for moving the reaction plate from one deck position to the other, hence saving time and deck space.

### Development Stage

Construction for prototype established.

### The Technology

After molecules of interest are captured, the paramagnetic beads can be concentrated at the side of the wells by turning on the electromagnets, and washing can then take place. To mix the samples, the four electromagnets surrounding each well can be turned on consecutively to stir the beads in the desired buffer.

### Applications and Commercial Opportunity

DKFZ is looking for a commercial partner to manufacture and distribute the device.

### Inventors

The inventor is Wilkening S. (DKFZ)

### Intellectual Property

Utility model granted as [DE202014004711](https://patentportal.de/DE202014004711).

### Further Information

No other public information is currently available, but further information (speaking with the inventor) is available under a signed Confidential Disclosure Agreement (CDA).

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### Figures:

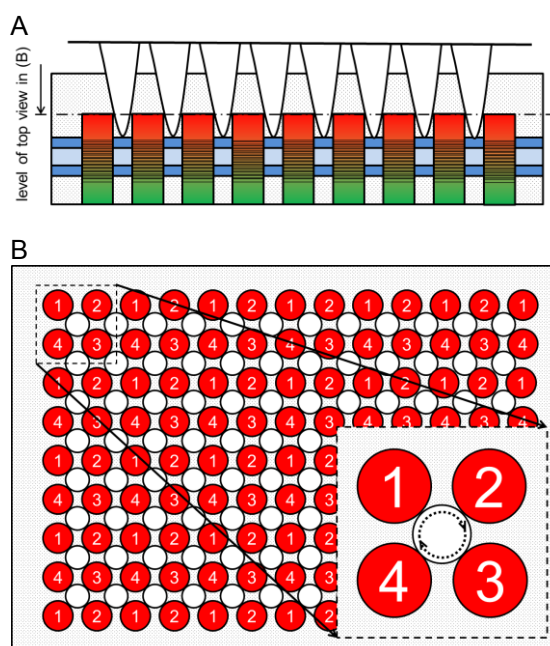


Figure 1;  
(A) Electromagnets (red-green) in thermocycler with Peltier element (blue).  
(B) Top view showing magnet arrangement and bead stirring in the detail view.