

# Spatial allocation effects within a potentization basic research model – evidence for field-like effects of homeopathic preparations?

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**Background:** The mode of action of ultramolecular homeopathic preparations is still unknown. Interactions between objects or entities can be grouped in four main general scientific categories: material, force-/field-like, entanglement-like or informational. Should homeopathic preparations have a field-like mode of action, there is greater probability of cross-contamination as long as the means to “shield” objects from each other is unknown. A field-like interaction would also lead to treatment at a distance effects that are distance-dependent. **Aims:** We analysed a set of experiments with *Arsenicum album* 45x treated wheat seedlings regarding a possible distance-dependent cross-contamination. **Materials and Methods:** We performed an *a posteriori* analysis of a set of 17 independent experiments [1,2] with wheat seedlings pre-treated with 1‰ arsenic. Three treatments were applied (*Arsenicum album* 45x, water 45x, or unpotentized water) with 150 seedlings in each treatment group per experiment. Seedlings were arranged in hanging plastic bags side-by-side in identically treated blocks of 10 seedlings. The 3x15 blocks were coded and randomly allocated to the three treatments. Wheat shoot length was measured after 7 days. Treatment effects were analysed as function of the position (1–10) within the blocks of 10 seedlings. **Results:** Analyzing all data, *Arsenicum album* 45x exerted an inhibiting effect (–3.2%, p=0.01) compared to both water and water 45x. When restricting the analysis to the outermost seedlings of all subgroups (pos. 1, 10), the treatment effect vanished (0.3%, p=0.92). In contrast, the innermost seedlings of all subgroups (pos. 5, 6) showed a treatment effect of –5.6% (p=0.02). Intermediate pairs of positions (pos. 2–4, 7–9) showed intermediate effects. Regarding shoot length, dependency on spatial position was observed for the plants of the water control groups, but not for the plants treated with *Arsenicum album* 45x. **Conclusions:** Whilst the effect of *Arsenicum album* 45x on wheat-shoot growth was not dependent on the spatial position within the subgroup, the water-control plants became smaller the closer they were to *Arsenicum album* 45x-treated seedlings. This observation is compatible with the existence of a field-like effect of homeopathic dilutions. Another possible explanation that cannot be ruled out by the present experiments, is contamination through the gas-phase. Future investigations of ultramolecular homeopathic preparations should control any such effects since they may mask treatment effects, leading to false-negative results. Closer investigation of the nature of this distance-dependent effect might contribute to identification of the mode of action of ultramolecular homeopathic preparations.

**Keywords:** Arsenicum album, mode of action, contamination

**References:**

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