

Waag Society  
De Waag  
Nieuwmarkt 4  
1012 CR Amsterdam

24 April 2012

**Re: Creation of competent strains of *E. coli* (DH5 alpha) at the De Waag.**

To whom it may concern,

This declaration is in support of the legality of inducing competence in the DH5-alpha strain of *E. coli* at De Waag. It refers to guidance from the National Institute for Public Health and the Environment (RIVM).

**Section 0. Background**

De Waag is a non-profit, community run space in central Amsterdam. The Do It Together Bio workshops and Open Wetlab are do-it-yourself biologists, artists and enthusiasts who regularly meet at De Waag for series of public events. The group consists of both professional and amateur biologists.

**Section 1. No genetic modification.**

Special regulations apply to working with genetically modified organisms. We believe that DH5 alpha will not be genetically modified at any point during the work undertaken at De Waag. We will work with DH5-alpha in both non-competent and competent forms. The non-competent form is a standard laboratory strain. Inducing competence does not constitute genetic modification, as exemplified in Article 24 of GMO Regulations, because the process:

1. Does not introduce nucleic acid molecules produced outside the organism;
2. Does not introduce any heritable genetic material prepared outside the organism, and
3. Does not cause cells to fuse in a non-natural way to produce new cells to produce cells with new combinations of genetic material.

Because the only activity we are performing on DH5-alpha is induction of competence, and because competence induction does not constitute genetic modification, the regulations related to genetic modification do not apply in this case.

**Section 2. Compliance with other regulations.**

We believe that activities at De Waag are covered by the Hazardous Substance Regulations through 'Extension of the meaning of "Work"'. This extends the meaning of "work" to any activity involving the consignment, storage, or use of a Group 2, 3 or 4 biological agent. The Approved Agents list describes *E. coli* as a Hazard Group 2 biological agent. However, the DH5-alpha strain is a derivative of the K-12 group of laboratory strains. The K-12 strain and its derivatives are safe strains and may be considered part of Hazard Group 1. The Hazardous Substances Regulations does not

concern itself with substances in Hazard Group 1. Because the Hazardous Substances Regulations are the only regulations concerning themselves with the handling of microorganisms, and because DH5-alpha is not covered by the Hazardous Substances Regulations, we believe that there is no legal restrictions on the creation of competent strains of DH5-alpha.

### **Section 3. Declaration**

I, ..... , declare that to the best of my knowledge there are no legal restrictions on the creation of competent strains of DH5-alpha at De Waag.

Signature:

### **Section 4. References.**

De Waag

<http://waag.org/en>

Do It Together Bio

<http://waag.org/en/project/do-it-together-bio>

GMO Regulations:

<http://bggo.rivm.nl/Documenten/Documenten%20regelgeving/Regeling-genetisch-gemodificeerde-organismen.pdf>

Approved Agents List:

<http://www.hse.gov.uk/pubns/misc208.pdf>

Hazardous Substances Regulations:

<http://www.legislation.gov.uk/uksi/2002/2677/contents/made>