CLAIMS

1. A deposit for a toilet for purifying toilet water from one or more environmentally hazardous organic substances, such as drug molecules, comprising one or more enzymes having the ability to eliminate said environmentally hazardous substances, wherein the deposit is designed to be attached to the toilet in such a way that it will release the one or more enzymes upon exposure to toilet flushing water, thereby allowing the one or more enzymes to enter the water in the toilet bowl and eliminate environmentally hazardous substances that are present in said toilet bowl, characterized in that the one or more enzymes are chosen from the group comprising of Epoxide hydrolase, Melamine Deaminase, Acetoacetate decarboxylase and Dehalogenase LinB.

2. The deposit according to claim 1, wherein the deposit is in the form of a toilet block suitable for being placed in a toilet bowl, and comprises a hydrophilic filling material, a hydrophobic releasing agent, a hydrophilic non-ionic surfactant, and one or more enzymes that may eliminate environmentally hazardous organic substances, such as drug molecules.

3. The deposit according to claim 2, wherein the deposit comprises 60-75%, preferably 70% hydrophilic filling material, 3-5 % hydrophobic releasing agent, 15-17 % hydrophilic non-ionic surfactant, and 5-20%, preferably 10% enzymes.

4. The deposit according to any of the claims 2-3, wherein (a) the hydrophilic filling material is chosen from starch and/or hydroxymethylcellulose, and/or (b) the hydrophobic releasing agent is magnesium stearate.

5. The deposit according to any of the claims 2-4, wherein the hydrophilic non-ionic surfactant is Tween-20.

6. The deposit according to any of claims 1-5, wherein the environmentally hazardous organic substances are drug molecules chosen from the group comprising of Citalopram, Fluconazole, Ibuprofen, Karbamazepin, Ketoconazol, Losartan, Metotrexat, Naproxen, Sertralin, Sulfametoxazol, Trimetroprim, Ketoprofen, Ofloxacine, and Norfloxacine.

7. Use of a deposit according to any of claims 1-6, for purifying toilet water from one or more environmentally hazardous organic substances, such as drug molecules chosen from the group comprising antibiotics, anti-depressive agents, anti-inflammatory agents, hormones, anti-fungal agents, blood pressure agents, antineoplastic agents (anti-cancer), sedatives and painkillers.

8. A method of purifying toilet water from one or more environmentally hazardous organic substances, such as drug molecules, chosen from the group comprising antibiotics, anti-depressive agents, anti-inflammatory agents, hormones, anti-fungal agents, blood pressure agents, antineoplastic agents (anti-cancer), sedatives and painkillers, comprising the steps of:

a) obtaining one or more enzymes having the capacity to eliminate one or more environmentally hazardous organic substances;

b) comprising the one or more enzymes obtained in step a) in a deposit designed to be attached to a toilet, such that flushing water flowing over the deposit releases the one or more enzymes comprised therein;

c) using the deposit to enzymatically reduce and/or eliminate the one or more environmentally hazardous organic substances from the toilet water,

characterized in that the one or more enzymes are chosen from the group comprising of, Epoxide hydrolase, Melamine Deaminase, Acetoacetate decarboxylase and Dehalogenase LinB.

9. The method according to claim 8, wherein step a) comprises the following steps

a1) providing one or more polynucleotide(s) encoding one or more enzymes having the capacity to eliminate an environmentally hazardous organic substance;

a2) producing the enzymes recombinantly in an organism transformed with a vector, such as a plasmid, comprising the polynucleotide from a), wherein the enzyme is produced by said organism, thereby obtaining said enzyme.

10. The method according to claim 9, wherein the vector comprises a signal peptide coupled to the polynucleotide coding for the enzyme, and wherein the signal peptide directs an extracellular transport of the produced enzyme.

11. The method according to any of claims 8-10, wherein the enzyme is recombinantly produced by an organism capable of extracellular production of the enzyme, so that the enzyme is transported by the organism to a supernatant in a culture of said organism, such as E. coli, a Bacillus species or yeast.

12. The method according to any of claims 8-11, wherein the supernatant comprising the enzymes is freeze-dried or lyophilized.

13. The method according to any of claims 8-12, characterised in that step b) comprises the steps of

i) mixing the enzymes with starch in 1:4 relation and homogenizing through grinding;

ii) adding hydroxymethylcellulose to the mixture from step i) in a 1:1 relation;

iii) adding Magnesium Stearate 1:20 to the mixture from step ii);

iv) adding Tween-20 1:5 to the mixture from step iii) and thereafter homogenizing the mixture;

v) moulding the mixture from iv) into deposits in the form of toilet blocks.

14. The method according to any of claims 8-13, characterized in that in step c) the deposit is used in toilets to purify toilet water from one or more environmentally hazardous organic substances, such as drug molecules, comprising the step of placing the deposit in the toilet such that when the toilet flushes, the flushing water will release enzymes from the deposit and allow the enzymes to enter the water in the toilet bowl.

15. The method according to any of the claims 8-14, wherein the environmentally hazardous organic substances are drug molecules chosen from the group comprising of Citalopram, Fluconazole, Ibuprofen, Karbamazepin, Ketoconazol, Losartan, Metotrexat, Naproxen, Sertralin, Sulfametoxazol, Trimetroprim, Ketoprofen, Ofloxacine, and Norfloxacine.