Question#72298 – Chemistry – Organic chemistry

Question: What is activator degas? I'm looking everywhere for a formula. Is there even a formula?

Answer:

An activator degas is a compound that removes gas from reaction mixture. There are many reasons of degasification. For example, there is a reaction like:

$$A(g) + B(solv) = C(g) + D(solv)$$

D is a desired product and C is a gas side product that cannot be removed via a gas outlet, because there is just a gas inlet for gas A and the system is closed. The gas C can direct the reaction in the wrong side (to produce a reagents) and it is very important to remove the gas C. It is possible when we use a sorbent as the activator degas. For example, we can use <u>activated carbon</u> when gas C is hydrogen disulfide H₂S. There are other methods for removing H₂S. We can use chemical reaction for this purpose:

$$Ag^{+}(solv) + H_2S(g) = Ag_2S(s) + 2H^{+}(solv)$$

Ag⁺ is the activator degas here.

Sometimes activator degas is used when we need to remove gas before reaction. It is important for reactions when the presence of Oxygen is unwanted (e.g. reactions with alkyllithium compounds). For reducing of Oxygen we can use degas activators <u>like sulfites (Na₂SO₃, (NH₄)₂SO₃).</u>

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