**Background**

- Most dangerous endocrine disruptors (EEDS) are the natural and synthetic estrogens, such as mestranol.
- Currently no removal in water treatment process.
- Studies worldwide have seen a common occurrence of feminized male fish at sites impacted by human and animal wastes.

**Objectives**

- To find the specific concentration of mestranol.
- Use HPLC ultimately to determine if mestranol concentration will decrease if a product such as a toilet bleach ball is used.

**Contamination**

- Struggled to find the specific concentration of mestranol.
- Used several different solvents.
- Such as water, methanol, acetonitrile.

**UV-Vis Spectroscopy**

- Absorbs UV light efficiently.
- Acetonitrile appears to be a better solvent than methanol.
- Acetonitrile does absorb somewhat at 274 nm, but it is a small interferent.

**HPLC Method Development**

- Developed a method of mestranol before entering into the water treatment process.
- A bleach ball will be tested in order to determine if it could work fast enough in order to degrade mestranol before entering into the water treatment process.

**Conclusion/Next Steps**

- Determined a quick (less than 10 min) method to determine the concentration of mestranol in a wastewater sample.
- Developing an efficient and precise method will provide a safer and cleaner water and environment.
- In the future, exploration of the kinetic and oxidative effects of mestranol will be developed.
- A bleach ball will be tested in order to determine if it could work fast enough in order to degrade mestranol before entering into the water treatment process.

**References**


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