

# Project Proposal

For the Degree Program in Sustainability Studies

## Identification and evaluation of bio-based materials for the production of bottle caps

**Duration:** 5-6 Months (27,5 ECTS = 825 h)

**Location:** Sigmaringen (Forschungsfabrik), partially Home Office

**Possibilities for a follow-up Master's Thesis:** yes

**Potential Cooperation Partners:** Spritzguss Müller GmbH, HS Geisenheim

**Supervisor / Contact:** Max Sturm, M.Sc.

**Aim of the project:** The aim of the work is to identify suitable bio-based materials for the production of a bottle cap, to produce test specimens from these materials and to determine their packaging-relevant properties.

**Project description:** The wine industry currently uses aluminium screw caps, natural corks, pressed corks and plastic or glass stoppers to seal wine bottles. The classic cork is being used less and less and is increasingly being replaced by various alternatives. Since 2012, the Bague Vin Suisse (BVS) long closure with external thread has become particularly popular. In addition to avoiding "cork taint", there are also practical reasons: screw caps are popular with restaurateurs and wine consumers because they allow bottles to be opened and reclosed without tools. It is important that the closure protects the wine from oxygen to preserve its quality.

**Suitable for / Requirements for the student:** Can be carried out in German or English. The student should be interested in the topic, have an independent way of working and be willing to comprehensively research properties of bio-based polymers and familiarize themselves with plastics compounding.