**PEGDA Gel with CMC and HCPK Recipe**

Ingredients:

* **Poly(ethylene glycol) diacrylate (PEGDA):** 40 grams
* **Carboxymethyl Cellulose (CMC):** 3 grams
* **Hydroxycyclohexyl phenyl ketone (HCPK):** 0.4 grams
* **95% Ethanol:** A small volume (as needed to dissolve HCPK)
* **Distilled Water:** Up to 200 mL final volume

Instructions:

1. **Prepare PEGDA Solution:**
   * In a mixing container, dissolve 40 grams of PEGDA and 3 grams of CMC in distilled water. Add water until the total volume is just under 200 mL, allowing room for the volume of ethanol to be added. Stir until both are completely dissolved and the mixture is homogeneous.
2. **Dissolve HCPK:**
   * In a separate small container, dissolve 0.4 grams of HCPK in a minimal amount of 95% ethanol (enough to fully dissolve the HCPK, typically a few milliliters).
3. **Combine Solutions:**
   * Mix the HCPK solution into the PEGDA/CMC solution thoroughly to ensure even distribution of the photoinitiator.
4. **Pour and Polymerize:**
   * Pour the final mixture into the desired mold or onto the surface. Expose to UV light (365 nm) for approximately 10 minutes. Adjust exposure time as needed based on the gel's depth and the UV source's intensity.