



PURPOSE: The purpose of this Standard Operating Procedure (SOP) is to ensure the customer can make a 40% oil dilution.

SCOPE: This SOP demonstrates how to make a 40% oil dilution using full spectrum cannabidiol (CBD) oil and medium-chain triglyceride (MCT) oil.

REFERENCES:

EQUIPMENT/MATERIALS:

- Full spectrum CBD oil
 - Ensure oil is hot and pourable
- MCT oil
- Product scale
 - Accurate to 1g
- Container for final oil dilution
- Production oven

PREPARATION:

I. CALCULATIONS

- a. To complete calculations, customer will need to know desired final mass of dilution
- b. Calculate the mass of full spectrum CBD oil required to add to MCT oil for dilution
 - i. Desired final mass of dilution = W
 - ii. Purity of full spectrum CBD oil = X
 - iii. Mass of full spectrum CBD oil required = Y
 - iv. Mass of MCT oil required = Z
 - v. $Y = (W * 0.4) / X$
 - vi. $Z = W - Y$

1. PHYSICAL PREPARATION:

- c. Container
 - i. Ensure a clean container is present for dilution
- d. Full spectrum CBD oil
 - i. Ensure oil is hot and pourable

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Preparation of 40% CBD in MCT Oil
Dilution

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PROCEDURE:

- I. Using product scale, pour mass of full spectrum CBD oil required for dilution (Y) into container
- II. Pour mass of MCT oil required for dilution (Z) into container
- III. Using production oven, heat dilution, periodically mixing until homogenous



APPENDIX A:

EXAMPLE CALCULATIONS

Dilution Parameters:

This example will solve for a theoretical 4 kg total mass, 40% CBD dilution using 80% full spectrum CBD oil

Calculations:

$$W = 4 \text{ kg}$$

$$X = 0.8$$

$$Y = (W * 0.4) / X$$

$$Z = W - Y$$

$$Y = (4 \text{ kg} * 0.4) / 0.8$$

$$Y = 2 \text{ kg}$$

$$Z = 4 \text{ kg} - 2 \text{ kg}$$

$$Z = 2 \text{ kg}$$

To make a 4 kg total mass, 40% CBD dilution with 80% full spectrum CBD oil, 2 kg of 80% full spectrum CBD oil and 2 kg of MCT oil must be mixed.