

## Smoke points of common culinary oils and fats



### What is the smoke point?

The smoke point, also called the burning point, is the temperature at which an oil or solid fat starts to produce a visible smoke that typically appears bluish-grey in color (1). You can also notice a change in smell, and the chemistry of the oil changes making the oil unsuitable to eat. The result of heating oil above the smoke point is oxidation and chemical breakdown, forming compounds that have been shown to potentially increase health risks to humans (2-5).

Keep in mind that smoke points can vary widely between manufacturers. In general, more refined oils will have higher smoke points than unrefined, virgin, or extra-virgin oils.

FAT	Smoke Point °F	Smoke Point °C	% OMEGA-3	% OMEGA-6	% MONO	% SAT
Grapeseed oil	510°F	268°C	0.1	69.6	16.1	9.6
Avocado oil	480°F	250°C	0.957	12.5	70.6	11.6
Refined soybean oil	450°F	234°C	6.79	51	22.8	15.6
Sesame oil	450°F	232°C	0.3	41.3	39.7	14.2
Refined high-oleic sunflower oil	450°F	231°C	0.192	3.61	83.7	9.86
Refined canola oil	445°F	230°C	9.14	19	63.3	7.36
Peanut oil	440°F	230°C	0	32	46.2	16.9
Refined corn oil	440°F	230°C	1.16	53.5	27.6	12.9
Palm oil	433°F	223°C	0.2	9.1	37	49.3
Cottonseed oil	430°F	220°C	0.2	51.5	17.8	25.9
<b>Chia oil - cold pressed</b>	<b>420°F</b>	<b>214°C</b>	<b>63</b>	<b>19</b>	<b>7</b>	<b>10</b>
Refined sunflower oil	408°F	209°C	0	65.7	19.5	10.3
Extra virgin olive oil	400°F	207°C	0.651	8.4	69.2	15.4
Walnut oil	400°F	200°C	10.4	52.9	22.8	9.1
Macadamia nut oil	390°F	199°C	0	3.57	78.6	14.3
Almond oil	390°F	197°C	0	17.4	69.9	8.2
Coconut oil	381°F	194°C	0.02	1.69	6.31	82.5
Ghee (Clarified Butter)	380°F	191°C	1.45	2.25	28.7	61.9
Lard	360°F	182°C	1	10.2	45.1	39.2
Butter	350°F	177°C	0.315	2.73	21	51.4
Virgin olive oil	340°F	175°C	0.761	9.76	73	13.8
Flaxseed oil	225°F	107°C	53.4	14.3	18.4	8.98

#### REFERENCES:

- Third-party analysis by EUROFINS lab for Benexia®.
- Chapter 2 - Composition, Structure, Physical Data, and Chemical Reactions of Fats and Oils, Their Derivatives, and Their Associates, Editor(s): Michael Bockisch, Fats and Oils Handbook, AOCS Press, 1998, Pages 53-120.