

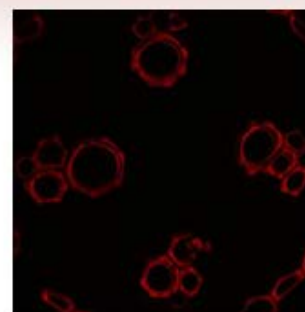
**MOIL-50NA - February 10, 2017**

Item # MOIL-50NA was discontinued on February 10, 2017. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

**MICROSCOPE IMMERSION OILS**

- ▶ Designed for Use with Oil Immersion Objectives
- ▶ Low Autofluorescence Oils Increase Image Contrast
- ▶ Ideal for Fluorescence and Multiphoton Imaging

## Application Idea



Fluorescence Image of Buttercup Root  
Taken with MOIL-30NF2 Immersion Oil  
Using a 40X, 1.3 NA Objective



**MOIL-30**  
Olympus Type F  
Immersion Oil



**MOIL-30NF2**  
Nikon Type NF2 Immersion Oil



**MOIL-10LF**  
Leica Type F Immersion Oil

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**OVERVIEW****Features**

- Oils for Use with Oil Immersion Objectives
- Very Low Autofluorescence Oils are Optimized for Fluorescence Microscopy
- Non-Drying and Polychlorinated Biphenyl (PCB) Free

These Microscope Immersion Oils are designed for use with Oil Immersion

Microscope Objectives. Placing an oil medium between the front surface of the objective and the cover glass allows the objective to achieve a high numerical aperture, maximizing light collection by the objective. To minimize refraction of light from the sample, the refractive indices of immersion oils are very close to those of cover glass. Thorlabs offers immersion oils with refractive indices of 1.515 or 1.518.

Immersion oils are available with low or very low autofluorescence. Autofluorescence is the natural fluorescence emission of the oil when exposed to light. Each immersion oil has a different level of background emission, which either increases or decreases the contrast of the image; oils with very low autofluorescence are optimized for use in sensitive or UV fluorescence microscopy applications.

Item #	MOIL-50NA	MOIL-30NF2	MOIL-30	MOIL-20LN	MOIL-10LF
<b>Refractive Index<sup>a</sup></b>	1.515 <sup>b</sup>		1.518 <sup>c</sup>		
<b>Abbe Number<sup>a</sup></b>	41 <sup>b</sup>	43 <sup>b</sup>	40.8 <sup>c</sup>	42.1 <sup>c</sup>	45.8 <sup>c</sup>
<b>Type</b>	Nikon Type A	Nikon Type NF2	Olympus Type F	Leica Type N	Leica Type F
<b>Viscosity<sup>a</sup></b>	150 mm <sup>2</sup> /s	450 mm <sup>2</sup> /s	450 mm <sup>2</sup> /s	825 mm <sup>2</sup> /s	435 mm <sup>2</sup> /s
<b>Autofluorescence</b>	Low	Very Low	Low	Low	Very Low
<b>Volume</b>	50 mL	30 mL	30 mL / 28 g	20 mL	10 mL

- These values are specified at 23 °C. 1 mm<sup>2</sup>/s = 1 cSt
- Specified at 587.6 nm
- Specified at 546.1 nm

[Hide Part Numbers](#)

Part Number	Description	Price	Availability
MOIL-50NA	Low Autofluorescence Immersion Oil, n = 1.515, Nikon Type A, 50 mL	\$48.50	Lead Time
MOIL-30NF2	Very Low Autofluorescence Immersion Oil, n = 1.515, Nikon Type NF2, 30 mL	\$198.00	Lead Time
MOIL-30	Low Autofluorescence Immersion Oil, n = 1.518, Olympus Type F, 30 mL	\$53.25	Today
MOIL-20LN	Low Autofluorescence Immersion Oil, n = 1.518, Leica Type N, 20 mL	\$61.25	Today
MOIL-10LF	Very Low Autofluorescence Immersion Oil, n = 1.518, Leica Type F, 10 mL	\$47.25	Today