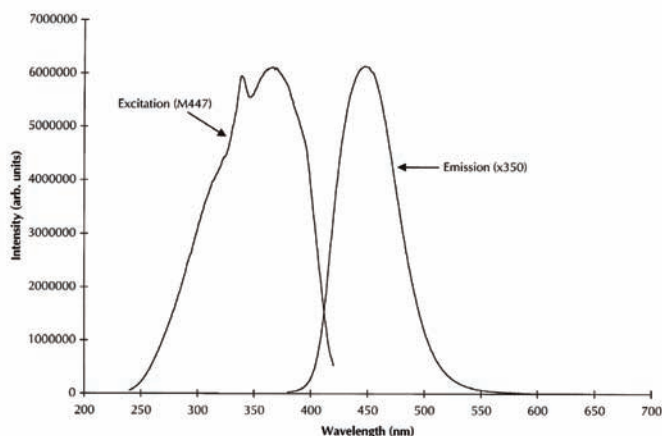


FLUORESCENCE STANDARDS

Highly stable, durable fluorescence standards for calibrating colorimeters and spectrophotometers

USFS-205 BLUE FLUORESCENCE



WHITE FLUORESCENCE STANDARDS

A scaled series of eight white fluorescence standards are available from Labsphere as the exclusive agent of Frederick T. Simon, Inc. FTS white fluorescence standards are the industry standards for instrumental and visual reflectance in the paper, plastic and textile industries.

The white fluorescence standards are available individually or as a set of the eight standards numbered 9 through 16. The number scale increases according to the amount of "whiteness" of the standard. The white standards are formulated with an opacifier and a fluorescent whitening agent (FWA) molded in an acrylic plastic. Standards 9 through 12 are made to approximate the Ciba-Geigy Plastic White Scale. Numbers assigned to the newer white standards indicate a general relation to the earlier scale, with numbers above 12 indicating a higher concentration of optical brightener. The amount of fluorescence obtained from this composition allows for a direct comparison to the evaluation of white paper, plastics or textiles without the need to extrapolate when comparing very bright materials.

The standards are available in a glossy finish and are specially coated to promote scratch resistance. The standards are extremely stable and durable, and are easily cleaned by using a mild liquid detergent and rinsing with distilled water. Each standard is housed in a durable delrin holder with a protective cover.

FEATURES:

- Consistent, reproducible fluorescence reflectance
- Highly diffuse
- Environmentally stable
- Rugged, long lasting

BEST FOR:

- Calibration of Colorimeters and Spectrofluorometers
- Standards for the Biomedical, Pharmaceutical, and Textile industries
- Paper industry standards for reflectance of "Bright White" paper products

SPECTRALON DIFFUSE FLUORESCENCE STANDARDS

Spectralon® fluorescence standards aid in the development of optically brightened materials such as paper and textiles and are widely used in the cosmetic industry. Unlike disposable paper fluorescence standards, Labsphere fluorescence standards provide highly stable, reproducible fluorescence reflectance over a long period of time in varying conditions.

Spectralon provides the ideal matrix for inorganic fluors which are photochemically stable compared to their organic counterparts. The stability of the inorganic fluors, when combined with the durability of the Spectralon, results in rugged, long-lasting fluorescence standards for both field and laboratory use.

Labsphere's Fluorescence standards are sold individually, in sets of three identical fluors, or as a set of the five fluors described. Each standard is housed in a durable delrin holder with a protective cover, and is uncalibrated.

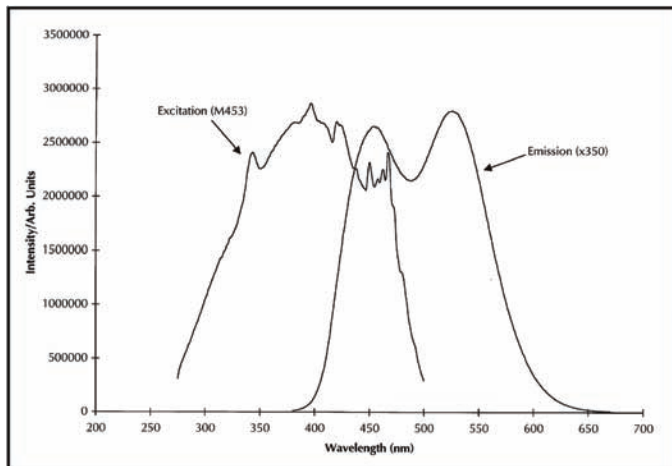


 **SphereOptics**

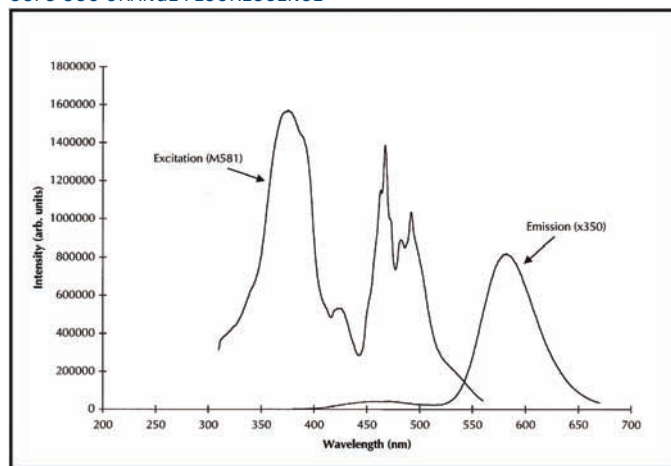
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Specifications

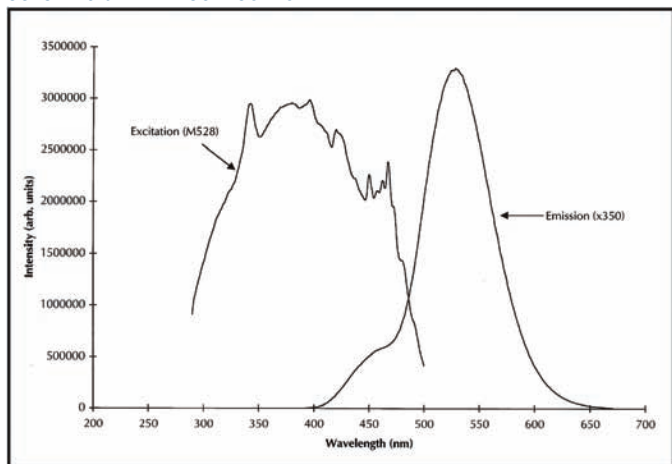
USFS-200 BLUE/WHITE FLUORESCENCE



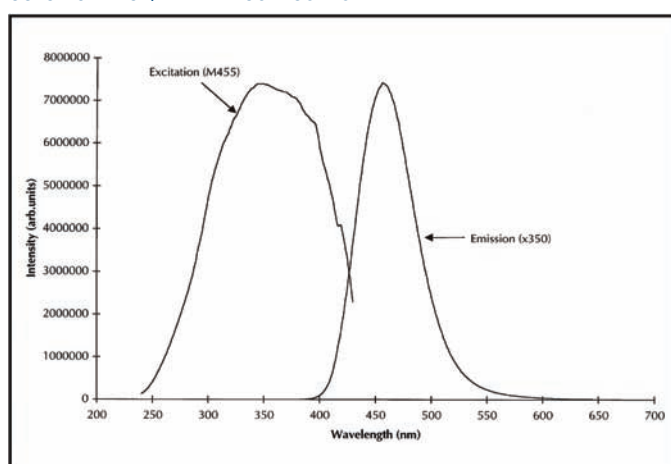
USFS-336 ORANGE FLUORESCENCE



USFS-210 GREEN FLUORESCENCE



USFS-461 BLUE/WHITE FLUORESCENCE



Spectralon Fluorescence Standards

Part Number	Order Number	Reflective area	Description	D _F Max*	Emission Maximum Range (NM)	Excitation Maximum Range (NM)
USFS-200-010	AS-01258-060	1.25 inches	Blue/white fluor	2.4%	460 (430 - 580)	340 (<300 - 400)
USFS-200-020	AS-01259-060	2 inches	Blue/white fluor	2.4%	460 (430 - 580)	340 (<300 - 400)
USFS-205-010	AS-01258-160	1.25 inches	Blue fluor	4.5%	440 (430 - 470)	340 (<300 - 370)
USFS-205-020	AS-01259-160	2 inches	Blue fluor	4.5%	440 (430 - 470)	340 (<300 - 370)
USFS-210-010	AS-01258-260	1.25 inches	Green fluor	3.0%	540 (510 - 570)	340 (<300 - 420)
USFS-210-020	AS-01259-260	2 inches	Green fluor	3.0%	540 (510 - 570)	340 (<300 - 420)
USFS-336-010	AS-01258-360	1.25 inches	Orange fluor	2.1%	590 (560 - 630)	340 (<300 - 360)**
USFS-336-020	AS-01259-360	2 inches	Orange fluor	2.1%	590 (560 - 630)	340 (<300 - 360)**
USFS-461-010	AS-01258-460	1.25 inches	Blue/white fluor	5.5%	460 (430 - 480)	320 (<300 - 390)
USFS-461-020	AS-01259-460	2 inches	Blue/White fluor	5.5%	460 (430 - 480)	320 (<300 - 390)
USFS-500-010	AS-01260-000	1.25 inches	Set of five standards			
USFS-500-020	AS-01261-000	2 inches	Set of five standards			

* D_F Max: The peak value of the fluorescent component of the materials's bispectral *Donaldson radiance factor*, as defined in ASTM E2153

**also has strong excitation band at 467 nm

White Fluorescence Standards

Part Number	Order Number	Reflective area	Description	D _{Fmax} *	Excitation Maximum Range (nm)	Emission Maximum Range (nm)
FTS-160-020	AS-01412-000	2.00 in	White-Scale 16	9.7%	390 (340 - 410)	430 (420 - 470)
FTS-150-020	AS-01412-100	2.00 in	White-Scale 15	9.6%	390 (350 - 410)	430 (420 - 470)
FTS-140-020	AS-01412-200	2.00 in	White-Scale 14	9.4%	390 (350 - 410)	430 (420 - 470)
FTS-130-020	AS-01412-300	2.00 in	White-Scale 13	7.6%	390 (350 - 410)	430 (420 - 470)
FTS-120-020	AS-01412-400	2.00 in	White-Scale 12	5.9%	390 (360 - 400)	430 (420 - 470)
FTS-110-020	AS-01412-500	2.00 in	White-Scale 11	5.3%	390 (360 - 400)	430 (420 - 470)
FTS-100-020	AS-01412-600	2.00 in	White-Scale 10	3.6%	390 (370 - 400)	430 (420 - 470)
FTS-090-020	AS-01412-700	2.00 in	White-Scale 9	0.0%	n/a	n/a
FTS-800-020	AS-01429-000	2.00 in	Set of 8 standards			

Scale: 16, 15, 14, 13, 12, 11, 10, 9

*D_{Fmax}: Bispectral peak value of the fluorescent component of *Donaldson radiance factor* (as defined in ASTM E2152). The *Donaldson radiance factor* scale is comparable to the *radiance factor* (or *reflectance factor*) scale.

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