

Materials List for:

Fluorescent Paper Strips for the Detection of Diesel Adulteration with Smartphone Read-out

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Materials

Name	Company	Catalog Number	Comments
4-dimethylamino-4-nitrostilbene (CAS Number: 2844-15-7)	Sigma-Aldrich	39255	4-DNS Dye
2-[ethyl[4-[2-(4-nitrophenyl)ethenyl]phenyl]amino]ethanol (CAS Number: 122258-56-4)	Sigma-Aldrich	518565	4-DNS-OH Dye
Whatman qualitative filter paper, Grade 1	Sigma-Aldrich	Z274852	Test strips support
Whatman application specific filter, activated carbon loaded paper, Grade 72	Sigma-Aldrich	WHA1872047	Fuel pre-treatment filters
Pall reusable in-line filter holders stainless steel, diam. 47 mm	Sigma-Aldrich	Z268453	Holder pre-treatment filters
(3-Aminopropyl)triethoxysilane	Sigma-Aldrich	919-30-2	APTES
4-(Dimethylamino)pyridine	Sigma-Aldrich	1122-58-3	DMAP
Succinic anhydride	Sigma-Aldrich	108-30-5	
Triethylamine	Sigma-Aldrich	121-44-8	Et ₃ N
<i>N,N'</i> -dicyclohexylcarbodiimide	Sigma-Aldrich	538-75-0	DCC
Stuart Tube Rotators	Cole-Parmer	SB3	Rotator
FreeCAD	freecadweb.org	-	Freeware - 3D design
Ultimaker Cura	Ultimaker	-	Freeware - 3D printing
Android Studio	Google	-	Freeware - App programming
Renkforce SuperSoft OTG-Mirror Micro-USB Cable 0,15 m	Conrad.de	1359890 - 62	Smartphone setup electronic part
Black Cord Switch 1 x Off / On	Conrad.de	1371835 - 62	Smartphone setup electronic part
Carbon Film Resistor 100 Ω	Conrad.de	1417639 - 62	Smartphone setup electronic part
492 nm blocking edge BrightLine short-pass filter	Semrock	FF01-492/SP-25	Filter excitation
550/49 nm BrightLine single-band bandpass filter	Semrock	FF01-550/49-25	Filter emission
Ø1/2" Unmounted N-BK7 Ground Glass Diffuser, 220 Grit	Thorlabs	DG05-220	Diffuser excitation
LED 465 nm, 9 cd, 20 mA, ±15°, 5 mm clear epoxy	Roithner	RLS-B465	LED excitation