

**S1 Table. Devices included in the study. Devices in bold were included in both laboratory and field evaluation phases**

Device name	Manufacturer or Institution	Market status	Technology Main Specification	Handheld	Cost <sup>a,b</sup>
<b>4500a FTIR Single Reflection</b>	Agilent Technologies	M	FTIR-MIR Spectral range 4000cm <sup>-1</sup> -650cm <sup>-1</sup>	N	US\$ 31,067
<b>C-Vue</b>	C-Vue	M <sup>c</sup>	Liquid chromatography	N	One unit with 214nm detector: ~US\$ 4,950 Stationary Column: ~US\$ 370 Additional 254 nm detector: ~US\$ 1,295 Accessories for sample preparation : ~US\$ 175
<b>Minilab</b>	Global Pharma Health Fund E.V.	M	TLC, disintegration test	N	US\$ 2,510 (without reference standards)
<b>MicroPHAZIR RX</b>	ThermoFisher Scientific	M	FTIR - NIR Wavelength range 1600nm-2400nm	Y	US\$47,500
<b>Neospectra 2.5 (SWS62221-2.5)</b>	Si-Ware	M	FTIR-NIR Wavelength range 1350nm-2500nm	N	Neospectra 2.5: US\$ 3,000 Light Source: US\$1,030 White Reference Tile: US\$310 Fiberoptic Cable and Probe: US\$1,261 Probe Holder: US\$67.83
<b>NIR-S-G1</b>	Young Green Energy –Innospectra <sup>d</sup> (the Global Good Fund developed the smartphone application)	M <sup>e</sup>	NIR - Dispersive Wavelength range 900nm-1,700nm	Y	US\$1,199 (without smartphone)
<b>Paper Analytical Device</b>	University of Notre-Dame and Veripad (Kenya, New-York and Boston)	D	Paper-based colour test	Y (S)	US\$3
<b>PharmaChk</b>	Boston University	D	Microfluidic device with luminescence detection	N	Unknown <sup>f</sup>
<b>Progeny</b>	Rigaku	M	Raman 1064 nm laser	Y	(ex-demo model)
<b>TruScan RM</b>	ThermoFisher Scientific	M	Raman 785 nm laser	Y	US\$ 62,500 (including chemometric software package and tablet holder)
<b>Unnamed-Lateral flow immunoassay</b>	China Agricultural University of Beijing and University of Pennsylvania	D	Lateral flow immunoassay dipsticks	Y (S)	US\$ 2-3 <sup>g</sup>
<b>Single-quadrupole QDa MS</b>	Waters	M	Mass spectrometry	N	US\$ 76,169

D: Under development, FTIR: Fourier Transform Infrared, M: Marketed, MS: Mass spectrometry, N: No, NIR: Near infrared, Y: Yes, HPLC: High Performance Liquid Chromatography, NIR: Near Infrared, MIR: Mid-Infrared, TLC: Thin-layer chromatography, S: Single-use device

a Ordering several devices to the manufacture is subject to potential reduced purchase cost

b The costs reported here do not include VAT and may vary by country of purchase

c The device is available for purchase but has been only used as an educational tool

d At the time of the study the NIR unit was produced by Young Green energy. It has been taken over by InnoSpectra Corporation.

e The near-infrared sampling unit is marketed but the smartphone application is not

f The device was lent by the developer and is still under development, and not available for purchase as far as we are aware

g Cost estimated by the manufacturer. The device is not marketed yet and is subject to variation. Purchasing several RDTs is subject to potential reduced purchase cost.