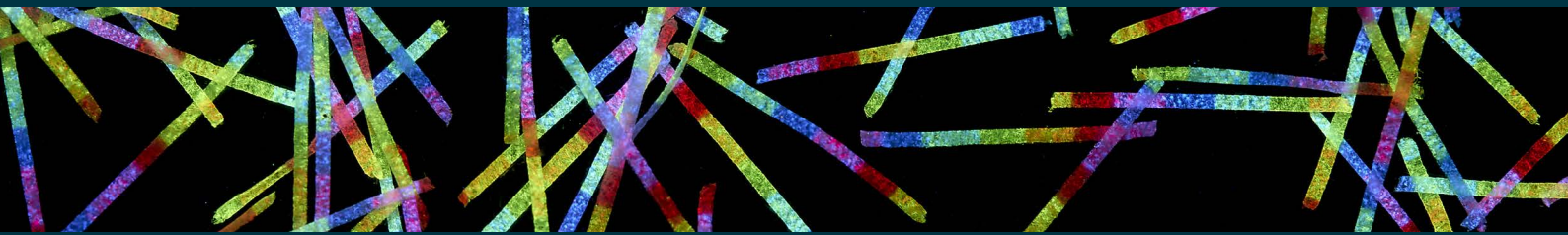


# Security Fibres for Banknotes



Rainbow Fibres™  
Spectrum Fibres™





While there has been much talk about a cashless society, for the foreseeable future cash is here to stay.

Despite the growth of digital payment systems, boosted by the COVID-19 pandemic, there is still a section of the population that continues to use cash. The use and volume of banknotes in countries vary according to different factors such as the level of economic activity and development, inflation and interest rates, financial technology advancements and government policy. In 2020 it is estimated that across over 190 countries there were approx. 170bn banknotes in circulation.

Banknotes are more than just currency; they represent their country and its central bank. Banknotes need to be protected against counterfeiting, be durable, and fit for purpose. Banknotes are evolving in terms of their use, substrate and security. Security needs to be incorporated into the banknote design, the substrate (paper or polymer) and the print.

There are **three levels of security**

**Level 1 : overt**

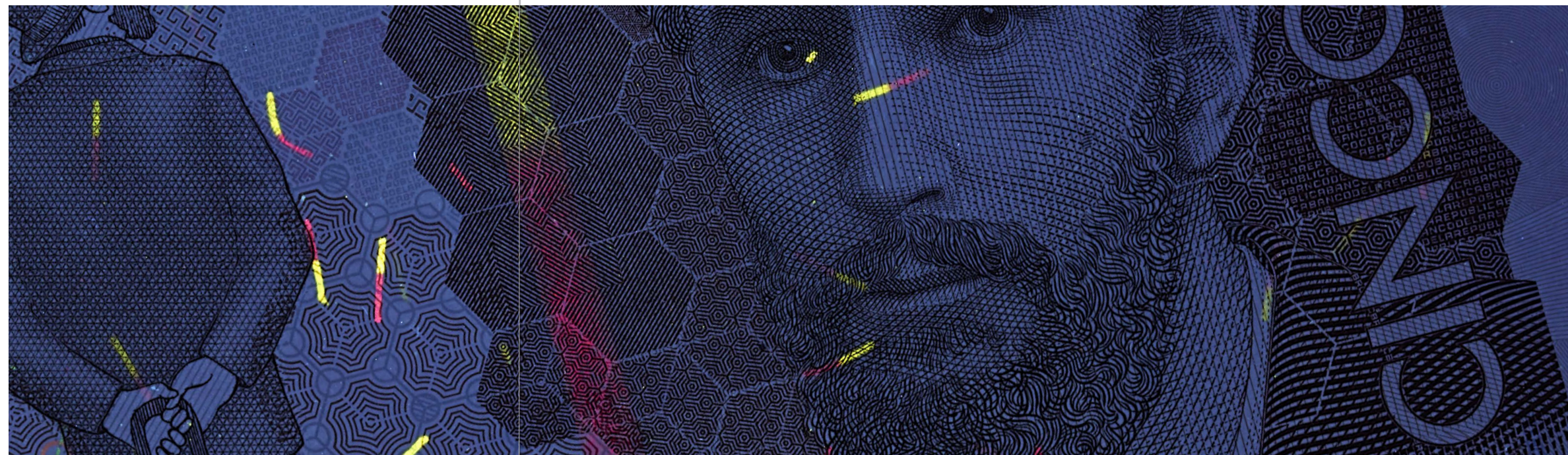
examples include watermark, holograms, intaglio print

**Level 2 : semi-covert**

examples include security fibres, paper threads, UV print

**Level 3: forensic**

requiring specialist readers/detectors; examples include note sorting features, nano-print



# Security Fibres for Banknotes

Most of the world's population still uses paper banknotes. These cotton-based banknotes have for many years used security fibres as one of the most reliable anti-copy security features. The random distribution and small size of the fibre, combined with the variety of colours in precise register, mean they cannot be reproduced by printing.





Fibres are also an aesthetic and easily recognisable semi-public feature. Security fibres may be visible (overt), invisible (covert) or incorporate a machine-readable feature (forensic).

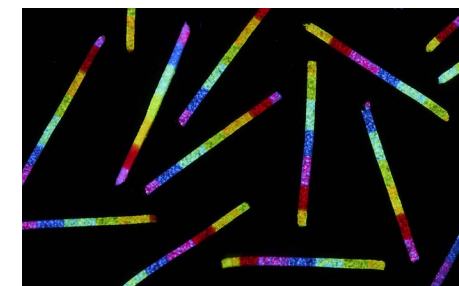
Their inclusion has no effect on the performance or physical properties of the banknote paper and the associated security attributes can be selected to conform to the rigorous durability and lightfastness demands of banknotes.

Your fibres will be unique to you. The colours chosen can be personalised and coordinated according to the colours on the flag and can be reproduced in the same sequence and position on each fibre.

Our high security fibres can replace existing single-colour fibres or can be used alongside single-colour fibres to future-proof the security and counterfeiting robustness of your banknote series.

Unlike many other banknote security features, fibres can be added as a rapid and highly effective upgrade to your existing banknote, without changing the banknote design and without incurring significant additional costs.

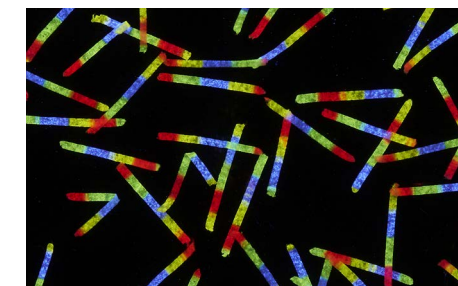
-  Anti-Stokes
-  UV Fluorescent
-  Bi-Fluorescent
-  Machine Detectable



## Spectrum Fibres™

Spectrum Fibres™ fluoresce under UV light in the six main spectral colours along the length of the fibre in the same order. They combine the whole range of spectral colours making this fibre unique and eye-catching, and almost impossible to counterfeit.

- One fibre - 6 spectral UV colours
- Bands are: Red, Orange, Yellow, Green, Blue, Violet
- Cellulose-based and invisible in ambient light














## Rainbow Fibres™

This range of multi-colour and multi-effect fibres is one of the most innovative developments in security fibres used in banknotes. The small size of the fibre, combined with the variety of fluorescent colours in precise register, makes it difficult to counterfeit.

Four-colour Rainbow Fibres™ fluoresce under ultra-violet light along the length of the fibre. We can combine dual-fluorescence, so that colours are different under long-wave and short-wave fluorescence.

The 'rainbow' appearance of the fibres makes it easy to describe and easy for the observer to identify. The fibres can also be a semi-public security feature if an invisible feature is combined with a visible feature.

- Colours selected to complement a country's flag or identity
- Each fibre is typically 3 or 4 distinct coloured bands
- Can include features such as short-wave UV and IR active
- Cellulose-based and invisible in ambient light

-  Anti-Stokes
-  UV Fluorescent
-  Register Cut
-  Multi-Colour
-  Bi-Fluorescent
-  Micro-Print
-  IR Infrared
-  IR Visible
-  Machine Detectable
-  Photochromic
-  Thermochromic



## Security Fibres Ltd

Security Fibres is a trusted partner to commercial security printers, state printing works, paper makers, governments and commercial organisations.

Our products help our clients stay ahead of the counterfeiter and are found in banknotes, passports, tax stamps, lottery tickets and other security paper grades across the world.

We have a long history of research and development supported by our extensive patent portfolio. With over forty years' experience producing security components for use in paper, we have an enviable client base and have earned their loyalty and trust through our integrity, discretion and reputation for innovation and quality.



**[securityfibres.com](http://securityfibres.com)**

Security Fibres Ltd  
Unit 3 Watermill Business Centre  
Edison Road  
Brimsdown, Enfield  
Middlesex, EN3 7XF  
United Kingdom

T: +44 (0) 208 805 9032

F: +44 (0) 208 365 9616

E: [info@securityfibres.co.uk](mailto:info@securityfibres.co.uk)