

The invention relates to information technologies, namely to a banknote, a method for authentication thereof and a device for realization of the method.

The banknote (1), according to the invention, includes identifying elements, a watermark (2), an alphanumeric code (3), readable sectors (4), on each of them are applied a coordinating grid (5) and a set of microperforations (6), randomly located on their surface forming a matrix, the matrix being equipped on both sides with a protective transparent layer (7).

The method for authentication of banknote, according to the invention, provides for the scanning of the banknote matrix and its comparison with the matrix previously placed in the database, the scanning being carried out by means of a device, in which the scanner is synchronized with the irradiation of the banknote with the intensity of  $10^2 \dots 10^4 \text{ W/cm}^2$ , in the impulsive mode with a pulse duration of  $10^{-3} \dots 10^{-4} \text{ s}$  and a frequency of  $1 \dots 10 \text{ Hz}$ .

The device for authentication of banknote, according to the invention, contains a light-tight chamber (17), covered on the inside with a light-absorbing material (19), in which is horizontally located a sealed cylindrical chamber (8), having on the lateral part a plate groove (9) for the location of the banknote, on the bases high-voltage terminals (10), and inside a reflector (18) and a transparent tube with inert gas (11), equipped at the ends with high-voltage electrodes (12), the device also contains an electric current source (13), connected through capacitors (14) to the electrodes (12), as well as a synchronizing unit (16), connected to the scanner (15) and the electric current source (13).

Claims: 6

Fig.: 4

