

Pursuant to Article 26, Article 27 and Article 43, paragraph (2), item (9) of the Act on the Croatian National Bank (Official Gazette 75/2008) and in connection with Article 12 of the Decision on the conditions for the recycling of kuna and lipa banknotes and coins (Official Gazette 91/2009 and 126/2009), the Governor of the Croatian National Bank hereby issues the

Decision on the minimum standards for automated and manual fitness sorting of banknotes

I GENERAL PROVISIONS

Article 1

(1) This Decision stipulates the minimum standards for automated and manual fitness sorting of banknotes for the purpose of separating good quality banknotes that are fit for circulation from the worn out or damaged banknotes that are unfit for circulation.

(2) Entities subject to this Decision shall be credit institutions, cash centres and other legal persons authorised to provide cash payment, disbursement and processing services.

(3) In the course of the automated or manual fitness sorting, banknotes with any defect under the standards defined in this Decision shall be deemed unfit for circulation.

(4) The acceptable tolerance level in the course of the automated fitness sorting referred to in paragraph (3) of this Article shall be 5%, which means that a maximum of 5% of the automatically sorted banknotes that do not meet certain criteria may be sorted as fit.

II MINIMUM STANDARDS FOR AUTOMATED FITNESS SORTING OF BANKNOTES

Article 2

(1) Minimum standards for automated fitness sorting of banknotes shall be laid down based on the following criteria:

	Criterion – defect	Definition
1.	Soil	General distribution of dirt across the entire banknote
2.	Stain	Concentration of dirt in one spot
3.	Graffiti	Image or lettering written or printed on a banknote
4.	De-inked banknote	Lack of ink on part or whole of a banknote

5.	Tear	Banknote with lengthwise, crosswise or diagonal tears
6.	Hole	Banknote with one or more holes of a specific area
7.	Mutilation	Banknote with a part missing along at least one edge
8.	Repairs	Parts of one or more banknotes joined together by tape or glue, etc.
9.	Crumples	Multiple banknote folds
10.	Limppness	Structural deterioration resulting in a lack of stiffness
11.	Folded banknote	Folded banknote parts
12.	Folded corner	Banknotes with corner folds of a certain length or width

Article 3

(1) Soil

Banknote soiling is determined by the level of dirt which increases the measured optical density of the banknote. The following table specifies the permitted level of banknote soiling as the maximum measured optical density of each banknote denomination in order for the banknote to still be deemed fit for circulation.

Denomination, issue	Maximum density increase for the banknote to still be deemed fit for circulation	Measuring filter
HRK 1,000, 1993 issue	0.05	Purple (Magenta)
HRK 500, 1993 issue	0.07	Purple (Magenta)
HRK 200, 2002 issue	0.12	Purple (Magenta)
HRK 100, 2002 issue	0.12	Purple (Magenta)
HRK 50, 2002 issue	0.11	Purple (Magenta)
HRK 20, 2001 issue	0.12	Purple (Magenta)
HRK 10, 2001 issue	0.12	Purple (Magenta)
HRK 10, 2004	0.12	Purple (Magenta)

issue		
HRK 5, 2001 issue	0.05	Purple (Magenta)

Banknotes not meeting these criteria, i.e. whose optical density is higher than the maximum permitted optical density for individual denomination shall be sorted out as unfit and as worn out. The spectrophotometric measurements of the optical density of reference banknotes shall be based on the following criteria:

- Standard for optical density measurements: ISO 5-3/4
- Standard for the filters: DIN 16536
- Absolute measurements: standard calibration/white tile
- Polarisation filter: on
- Aperture: 3 mm
- Illumination: D65/2°
- Background: white paper 1.90 mm.

The measured optical density increase of a banknote shall be the highest permitted level of soil measured as the average of four measurement points on the front of the banknote, in the non-printed area, excluding the area of the watermark.

(2) Stain

Banknotes with a concentration of dirt in one spot covering at least 9mm by 9 mm in the non-printed area or at least 15mm by 15 mm in the printed area shall be unfit and shall be sorted out as damaged banknotes.

(3) Graffiti

Banknotes on which an image or lettering is written or printed and can be detected by image detectors shall be sorted out as damaged banknotes.

(4) De-inked banknotes

De-inked banknotes are banknotes with reduced colour quality as a result of being washed or subjected to aggressive chemical agents. These banknotes shall be unfit. De-inked banknotes can be detected by image detectors or UV detectors and shall be sorted out as damaged banknotes.

(5) Tear

Banknotes with tears which are open and are not partly or fully covered by the transport belts of the banknote processing machine shall be unfit and shall be sorted out as damaged banknotes if the size of the tear is greater than indicated in the table below:

Direction	Width	Length
Vertical	4 mm	8 mm
Horizontal	4 mm	15 mm
Diagonal	4 mm	18 mm

The diagonal tear is measured by drawing a straight line from the peak of the tear to the edge of the banknote where the tear begins.

(6) Hole

Banknotes with one or more holes which are not partly or fully covered by the transport belts of the banknote processing machine shall be unfit if the area of the hole is greater than 10 mm². Such banknotes shall be sorted out as unfit.

(7) Mutilation

Banknotes with edge lengths reduced by 6 mm or more or edge widths reduced by 5 mm or more relative to the defined banknote dimensions shall be unfit and shall be sorted out as damaged.

(8) Repairs

A repaired banknote is a banknote created by joining together parts of the same banknote with tape, glue, etc. A banknote with tape covering an area greater than 10 mm by 40 mm and which is more than 50 micrometer thick shall be unfit and shall be sorted out as damaged.

(9) Crumples

Crumpled banknotes are banknotes with multiple crumples whose paper stiffness is reduced. Such banknotes shall be unfit and shall be sorted out as damaged.

(10) Limpness

Limp banknotes are banknotes whose paper structure is damaged which results in the lack of its stiffness. Such banknotes shall be unfit and shall be sorted out as worn out.

(11) Fold

Folded banknotes are banknotes whose length is reduced by more than 6 mm or whose width is reduced by more than 5 mm due to folds. Such banknotes shall be unfit and shall be sorted out as worn out.

(12) Folded corner

Banknotes with a folded corner with an area of more than 130 mm² and a minimum length of the smaller edge greater than 10 mm shall be unfit and shall be sorted out as damaged.

III MINIMUM STANDARDS FOR MANUAL FITNESS SORTING OF BANKNOTES

Article 4

(1) Manual fitness sorting is the fitness checking of each individual banknote. Manual fitness sorting may be carried out by trained staff members who have completed the training for manual banknote processing.

(2) In the course of manual fitness sorting of banknotes, banknotes with any defects as set out in paragraph (4) of this Article or with visually noticeable defects in one of the security features shall be unfit and shall be sorted out as worn out or damaged.

(3) Folded banknotes and banknotes with folded corners may be manually unfolded and, where possible, sorted as fit.

(4) Minimum standards for manual fitness sorting of banknotes shall be laid down on the basis of the following criteria:

Criterion – defect		Description
1.	Soil	Visually noticeable distribution of dirt across the banknote
2.	Stain	Visually noticeable concentration of dirt in one place
3.	Graffiti	Visually noticeable image or lettering written or printed on a banknote
4.	De-inked banknote	Visually noticeable lack of ink on part or whole of the banknote
5.	Tear	Banknote with at least one tear at the edge
6.	Hole	Banknote with at least one visually noticeable hole
7.	Mutilation	Banknote with a part or parts missing along at least one edge

8.	Repairs	Parts of a banknote joined together by tape, glue, etc.
9.	Crumples	Banknote with multiple folds that strongly affect its visual appearance
10.	Limpness	Banknote with structural paper damage resulting in the lack of stiffness
11.	Folded banknote	Banknote that is folded, including a banknote that cannot be unfolded
12.	Folded corner	Banknote with at least one clearly noticeable folded corner

IV TRANSITIONAL AND FINAL PROVISIONS

Article 5

The entities subject to this Decision shall bring their operation in compliance with the provisions of this Decision until 1 December 2012.

Article 6

(1) Until the expiry of the deadline for compliance laid down in Article 5 of this Decision the permitted banknote soiling level shall be determined by the level of dirt which increases optical density and decreases reflectance in the manner set out in this Article.

(2) The permitted banknote soiling level for the banknote to still be deemed as fit for circulation shall be as follows:

Denomination, issue	Maximum density difference between limit sample and new banknote	Minimum reflectance to be exhibited by limit sample (%)
HRK 1,000, 1993 issue	0.03	93
HRK 500, 1993 issue	0.03	93
HRK 200, 2002 issue	0.07	84
HRK 100, 2002 issue	0.07	84
HRK 50, 2002 issue	0.07	84

HRK 20, 2001 issue	0.07	84
HRK 10, 2001 issue	0.07	84
HRK 10, 2004 issue	0.07	84
HRK 5, 2001 issue	0.07	84

(3) Banknotes sorted out according to specifications shall be classified as worn out banknotes.

Article 7

The Decision on defining standards for fitness sorting of banknotes by banknote sorting machines, No. 208-020/06-04/ŽR of 7 July 2004., shall cease to have effect by virtue of the entry into force of this Decision

Article 8

This Decision shall enter into force on the eight day after the day of its publication in the Official Gazette.

No.: 202-020/09-12/BV

Zagreb, 17 September 2012

Croatian National Bank
Governor
Boris Vujčić