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## THE 6<sup>TH</sup> CENTURY AD GLASS STEMMED GOBLETS FROM EXCAVATIONS IN HISTRIA (CENTRE-NORTH SECTOR)

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**Abstract:** *The excavations conducted starting with 2010 in the Centre-North Sector from Histria/Istros (Romania) brought to light among other categories of finds a small number of glass fragments belonging to stemmed goblets with folded base (Isings form 111), a widespread type of vessel of the Late Roman/Early Byzantine period.*

**Rezumat:** *Cercetările arheologice desfășurate începând din 2010 în Sectorul Centru-Nord de la Histria (Romania) au dus la descoperirea, printre alte categorii de materiale, a unui mic număr de fragmente de sticlă provenind de la pahare cu picior (Isings form 111), un tip de vas cu o largă răspândire în perioada romană târzie și bizantină timpurie.*

**Keywords:** *Early Byzantine; Histria; stemmed goblets.*

**Cuvinte cheie:** *perioada bizantină timpurie; Histria; pahare cu picior.*

### INTRODUCTION

The archaeological research in the Sector Centre-North (Histria, Romania) started in 2010, with the main objective of checking the situation of the area north from the Episcopal basilica and the possible connections with this important Christian monument during the 6<sup>th</sup> century AD. The excavations conducted so far brought to light one or possibly more stone-walled buildings (one of which could have functioned as a warehouse) covered by a debris layer datable to the 6<sup>th</sup> century AD, formed as a result of the final abandonment of this inhabitation area (Fig. 1).

### STRATIGRAPHY AND CHRONOLOGY

The stratigraphy of the sector consists of: the present-day vegetal layer; a layer artificially created with earth resulted during the excavations in the sector of the Episcopal basilica and deposited in this area; a layer of debris produced by the final collapse of the buildings, presumably at the end of the 6<sup>th</sup> – the beginning of the 7<sup>th</sup> century AD. Following the internal chronology of the Roman Histria proposed by A. Suceveanu and based on the documented association of the structures from Sector Centre-North with the Episcopal basilica, it can be stated that their period of use corresponds to the two phases of functioning of the basilica, phases IV A (first half of the

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6<sup>th</sup> century AD) and IV B (second half of the 6<sup>th</sup> century AD)<sup>1</sup>, more probable to the latter.

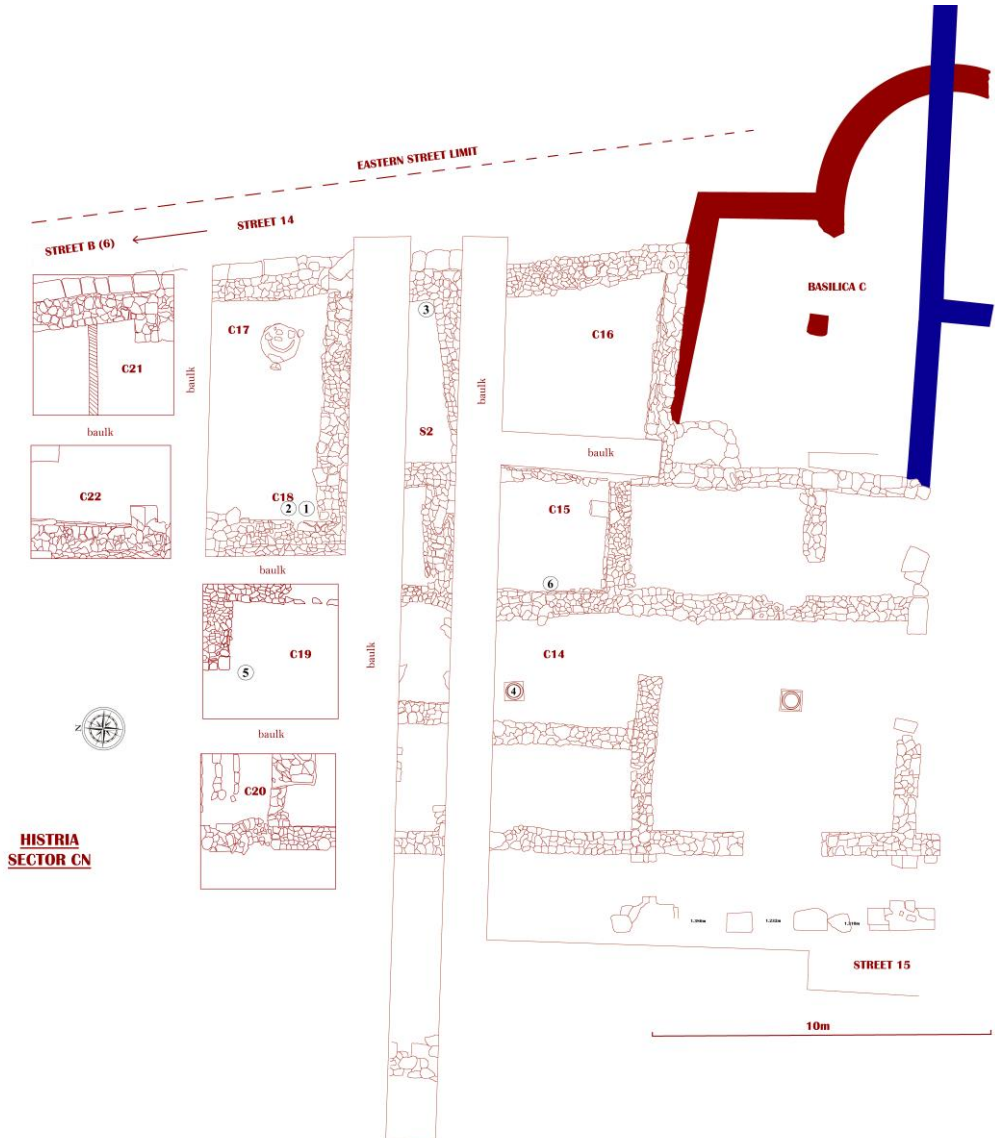


Fig. 1. Plan of the Centre-North Sector (Histria) with the indication of the find place of the fragmentary stemmed goblets.

<sup>1</sup> Băjenaru, Băltăc 2000-2001, 469.

## THE GLASS FINDS

During the excavations glass represented a regular presence among other categories of finds (pottery, metal objects, coins, animal bones, architectonic fragments). The finds belonging to this category can be split into two groups: fragments of window or door glass panes, recovered in large quantities, and fragments of various types of glass vessels. The items taken into consideration in the present article were selected from the second group.

## STATE OF PRESERVATION

All the glass found in the 6<sup>th</sup> century level of the sector is in an advanced state of fragmentation, situation which makes difficult the process of attributing the fragments to specific types of vessels. Also, the conditions of preservation led to the presence of iridescence, pitting, and deposition of dark weathering crusts, in various degrees. This situation is very similar to that noticed in the case of other glass finds from Histria, such as those from the Episcopal basilica<sup>2</sup> and the Acropolis Centre-South Sector.

## TPOLOGY

The glass fragments selected for the present article belong to the category of stemmed goblets (Isings form 111)<sup>3</sup>. Their degree of fragmentation allowed only the identification of feet belonging to this type of vessels from the Centre-North Sector. This situation is far from being new or exceptional in any way; even the first published item belonging to this type, found in Karanis (Egypt), was identified as a specific type of stemmed goblet only based on the surviving part – a fragment of the folded base and hollow stem<sup>4</sup>.

The wall fragments are in general quite difficult to identify<sup>5</sup>, as they can belong to several different types of vessels. Complete stemmed goblets are seldom found, the most striking exception being their presence as part of deposits including lamps of various types found mainly inside churches and synagogues or in connection to them<sup>6</sup>. Still, enough items were either found completely preserved or in a state allowing the reconstruction of their profile as to show that they could have U-, poppy-

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<sup>2</sup> Băjenaru, Bâltâc 2000-2001, 471.

<sup>3</sup> Isings 1957, 139-140.

<sup>4</sup> Harden 1936, class VIIA, variant III, Cat. No. 489, Pl. XVI/489; Isings 1957, 140 – also presented as a third variant of stemmed goblets.

<sup>5</sup> Khruškova 2009, 343.

<sup>6</sup> Băjenaru, Bâltâc 2000-2001; Băjenaru, Bâltâc 2006; Golofast 2009, 315; Israeli 2003, 194; Khruškova 2009, 343.

or bell-shaped bodies, usually with a fire-rounded thickened rim, either vertical or slightly in- or outcurved. As such rims could characterise also other types of lamps, bell-shaped beakers or even bowls, in themselves they do not represent enough guarantee for the type of vessel they belonged to<sup>7</sup>. This situation led to the creation of various typologies based mainly on the features of the foot<sup>8</sup>, as it is the easiest part to recognise as characteristic for the type and the degree of confidence in a correct attribution is the highest<sup>9</sup>.

### FABRIC

The items can be described as being made of medium quality glass, transparent but characterised by bubbles usually less than one millimetre in diameter. The presence of various amounts of bubbles in composition seems to be characteristic for this type of vessel, a fact often mentioned in publications. The fragments less affected by the preservation conditions present a smooth glossy surface (for example Cat. No. 4).

Taking into consideration the observations made during work on the fragments of stemmed goblets recovered so far from the Centre-North Sector and also from the Acropolis Centre-South Sector, either published here or in preparation for publication, it was decided that from the point of view of colour the material can be assigned to four groups: green, greenish tinge, olive oil and bluish tinge. It should be mentioned that this separation is more or less artificial, and can be considered as rather conventional, made with the purpose of easing the categorisation of glass based on this criterion. In reality, the fragments considered as green have in common the fact that the colour is strong and deep, but it can range in shade quite a lot, although most of the items display a grass-green colour. The greenish tinges are again quite varied, ranging from very pale, almost colourless, examples to almost green. The same observation can be made for the bluish tinge, which tends to vary both in depth and shade, from almost colourless glass to pale blue to turquoise-blue or greenish blue. All the fragments covering the whole range of yellows and browns and everything in-between have been assigned to the olive oil colour group, although most of the items identified so far as belonging here can be indeed best described as having the colour of the olive oil. Leaving aside the variation of

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<sup>7</sup> Golofast 2009, 305, 315.

<sup>8</sup> Isings 1957, 139-140; Çakmakçı 2009; Golofast 2009, 305-319.

<sup>9</sup> Although it should be mentioned that a certain degree of incertitude could exist in many cases if the bottom of the vessel's body is not preserved, thus offering the chance to indicate its general shape, since feet with short hollow stems and folded tubular bases were sometimes associated during this time span with other types of vessels, such as flasks (see Stern 2001, 268-269, Cat. No. 160-161). Băjenaru, Bâltăc 2000-2001, 471. 476; Golofast 2009, 302; Stern 2001, 309-311, Cat. Nos. 172-174.

colour or tinge from vessel to vessel, it should be kept in mind that this variation could also characterise in many cases the different parts of the same vessel, due to variations in the thickness of the glass<sup>10</sup>, situation noticed when compared the shade of the base to that of the stem and to that of the wall in the case of more completely preserved items (see for example Cat. No. 4).

The six items taken into consideration here have representatives in all the four designated colour groups: one fragment is green (Cat. No. 1); two are characterised by a greenish tinge (Cat. Nos. 5-6); two are olive oil in colour (Cat. Nos. 2, 4); one is characterised by a bluish tinge (Cat. No. 3). Although the batch is too small to allow drawing even partial conclusions, it can be noticed that 50% of the fragments cover the range of green and greenish tinges, fact which could be considered an indication that natural-coloured glass was used for fabrication in their case.<sup>11</sup> Also in the case of the goblets which were part of the deposit found in the Episcopal basilica from Histria it was noticed that green and yellow, both presenting various shades, are the predominant colours<sup>12</sup>.

## DIMENSIONS

As already mentioned, all the discussed items are in an advanced state of fragmentation, situation impeding even the estimation of the initial height of the goblets or of the diameter of their rim, the dimensions most often indicated when completely preserved vessels of this type are published<sup>13</sup>. Given the fact that the vast majority of the published goblets is usually in a similar state of fragmentation, it was decided to offer all the information possible in the present case. As a result, the dimensions indicated in the catalogue comprise the preserved height of the item, the diameter of the respective fragments (in general stem and/or base<sup>14</sup>, and also of the pontil when present), and the thickness of the glass. It can be noticed that the diameter of the base, measured or estimated, falls between 3.3/3.5 – 4.1 cm, and the diameter of the stem between 0.8-1 cm. The thickness of the glass wall is between 0.25 and 0.4 cm for the base (with the tubular ring being in some cases thicker than the rest of the base), while the body wall, when preserved, is much thinner, around 0.15 cm. The diameter of the pontil ranges between 0.9 and 1.2 cm. It should be emphasised that the thickness of the base sometimes varies in different points, due to the fact that the

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<sup>10</sup> Golofast 2009, 302.

<sup>11</sup> Golofast 2009, 302.

<sup>12</sup> Băjenaru, Băltăc 2000-2001, 476.

<sup>13</sup> Israeli 2003, Cat. Nos. 236-237; Stern 2001, Cat. Nos. 172-174.

<sup>14</sup> In many cases the fragmentary condition of the base made necessary the estimation of its original diameter.

process of folding the glass led to irregularities. Also, it is most probable that the rim of the goblet, being fire-rounded, was slightly thicker than the rest of the body wall<sup>15</sup>. As far as this situation allows for comparisons, these values are comparable with those published in the case of similar items. For example, the goblets from the Episcopal basilica in Histria have stem diameters between 0.8 and 1.5 cm and diameters of the base between 2.9 and 5.8 cm, with the majority included between the values 3.5-4.5 cm<sup>16</sup>. The diameter of the pontil marks and scars also matches well values known for other items, as for example goblets from the Ernesto Wolf collection with the pontil diameter of 0.9-1 cm<sup>17</sup>.

### TECHNOLOGY

The goblets with a folded stemmed foot represent one of the most characteristic shapes of the Early Byzantine period. At least a part of their success could be a consequence of the technology which easily allowed the fabrication of the entire vessel from one glass bubble by folding the base and the stem out of the lower half of the bubble, while the part nearest the blowing pipe became the bowl, and as a result speeding up the production considerably<sup>18</sup>. This manufacturing technique led to the creation of the characteristic foot: the stem was a hollow tube, from which the base was obtained by folding the glass until its opposite sides were contiguous, with the exception of the edge which took in general the shape of a tubular ring<sup>19</sup>. The stem itself could be either cylindrical or slightly conical in shape or expand in the shape of a bead/knob in its central area<sup>20</sup>.

In the case of the goblets found in the Episcopal basilica deposit it was determined that the relatively short hollow stems are either cylindrical or conical in shape, or are beaded/knobbed. Based on the area where the air column closes inside the stem, the authors identified several techniques and resulting groups: goblets with the stem blocked at the point of transition between stem and body; goblets with the stem blocked at half its height; goblets with the stem blocked at the point of transition between base and stem<sup>21</sup>.

It can be noticed that in the case of the items recovered from the Centre-North Sector the first variant, with a cylindrical stem, is better represented (Cat. Nos. 1, 4, 5),

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<sup>15</sup> See for example Stern 2001, Cat. No. 172.

<sup>16</sup> Băjenaru, Băltâc 2000-2001, 477.

<sup>17</sup> Stern 2001, Cat. Nos. 172-174.

<sup>18</sup> Stern 2001, 270.

<sup>19</sup> Harden 1936, 170, no. 489; Isings 1957, 140; Israeli 2003, 197-198, Cat. Nos. 236-237.

<sup>20</sup> Çakmakçı 2009; Golofast 2009, 315.

<sup>21</sup> Băjenaru, Băltâc 2000-2001, 476.

only one item belonging to the knobbed variant (Cat. No. 2). The remaining two items representing base fragments, it is impossible to determine to which variant they belonged to in the beginning. It seems also quite clear that the variation of the closing point of the air column characterising the vessels found at the Episcopal basilica is present in the case of these items too.

## CHRONOLOGY

Although the stemmed goblets belonging to Isings form 111 were in general considered to date from the 4<sup>th</sup> century AD and later<sup>22</sup>, the finds from well-dated contexts seem to indicate that this shape does not predate in fact the mid of the 5<sup>th</sup> century AD, reaching a peak in use during the 6<sup>th</sup> and 7<sup>th</sup> centuries AD<sup>23</sup>. Given the fact that all the other archaeological materials from the sector indicate the buildings being in use during the 6<sup>th</sup> century AD, nothing impedes the attribution of the discussed items to this chronological frame, and even to the second half of this century, in connection to the last phase of existence of this inhabitation area.

## CATALOGUE

**1. Code:** HIS 15 CN (Fig. 1; 2/1; 3/1)

**Campaign:** 2015

**Trench:** 18

**Square:** 18C

**Depth:** - 0.40 m

**Context:** debris layer (6<sup>th</sup> c. AD)

**Preservation:** fragmentary

**Description:** fragment of a goblet with completely preserved stem and partially preserved base; small part of the bottom of the body also preserved; hollow stem; base encircled by tubular ring; annular pontil; iridescent

**Transparency:** transparent

**Colour:** green

**Bubbles:** spherical (< 1 mm); spherical and elongated on the inferior part of the body

**Quality:** medium

**Height:** preserved 3.1 cm; foot 1.25 cm; stem 1.25 cm

**Diameter:**

- **Base:** estimated 4 cm (preserved 2.8 cm)
- **Stem:** 1 cm

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<sup>22</sup> Isings 1957, 139.

<sup>23</sup> Stern 2001, 271.

- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** estimated 1.2 cm

**Thickness:** 0.35 cm (base); 0.3 cm (stem); 0.15 (body wall)

**Type:** Isings form 111; Harden class VIIA (division III); Çakmakçı type A1b

**Analogies:** similar to: Băjenaru, Bâltâc 2006, 224, cat. no. 25; Foy, Picon 2005, fig. 9; Milavec, Šmit 2018, pl. 1, fig. 22; Foy *et alii* 2003, fig. 11, VRR 142, VRR169; Israeli 2008, 412, 184; Dussart 1998, BIX.1, pl. 17, 16; Gliozzo *et alii* 2016, FAR 7; Israeli 2003, 198, no. 237.

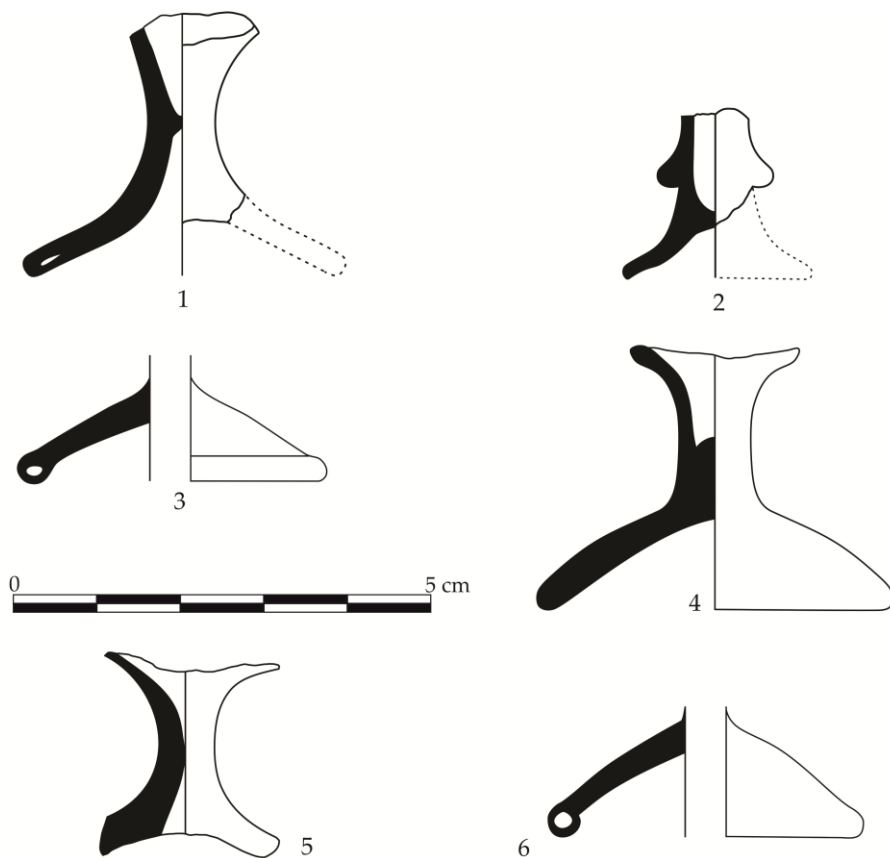


Fig. 2. Fragmentary stemmed goblets from the Centre-North Sector (Histria).

**2. Code:** HIS 15 CN (Fig. 1; 2/2; 3/2)

**Campaign:** 2015

**Trench:** 18

**Square:** 18C

**Depth:** - 0.40 m



**Context:** debris layer (6<sup>th</sup> c. AD)

**Preservation:** fragment

**Description:** fragment of a goblet with knobbed stem; part of the hollow stem with flattened knob preserved; pontil scar; iridescent; heavy pitting

**Transparency:** transparent

**Colour:** olive oil

**Bubbles:** spherical (< 1 mm)

**Quality:** low

**Height:** preserved 2 cm; stem 1.8 cm

**Diameter:**

- **Base:** not preserved
- **Stem:** 0.9 cm; bulb 1.4 cm
- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** estimated 1 cm

**Thickness:** 0.35 cm (base); 0.15 (stem)

**Type:** Isings form 111

**Analogies:** similar to: Băjenaru, Băltăc 2006, cat. no. 47; Czurda-Ruth 2007, Taf. 19, 691, 712, 721, 753; Schwarzer 2009, Taf. 2, 38 ASKL

**3. Code:** HIS 13 CN (Fig. 1; 2/3; 3/3)

**Campaign:** 2013

**Trench:** S II

**Square:** 1

**Depth:** - 1.35 m

**Context:** debris layer (6<sup>th</sup> c. AD)

**Preservation:** fragment

**Description:** fragment of a base encircled by tubular ring; pontil scar; iridescent; weathering patches

**Transparency:** transparent

**Colour:** bluish tinge

**Bubbles:** spherical (< 1 mm)

**Quality:** medium

**Height:** preserved 1.2 cm

**Diameter:**

- **Base:** estimated 4 cm (preserved 2.2 cm)
- **Stem:** not preserved
- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** not preserved

**Thickness:** 0.25 cm (base); 0.35 cm (ring)

**Type:** Isings form 111; Harden class VIIA (variant III)

**Analogies:** similar to: Băjenaru, Băltăc 2006, cat. no. 26; Milavec, Šmit 2018, pl. 2, fig. 2; Buljević 2001, cat. no. 25, fig. 25; Fünfschilling, Lafli 2013, Taf. 2, VR1/48; Taf. 5, VR5/7; Czurda-Ruth 2007, Taf. 19, 634



Fig. 3. Fragmentary stemmed goblets from the Centre-North Sector (Histria).

**4. Code:** HIS 13 CN (Fig. 1; 2/4; 3/4)

**Campaign:** 2013

**Trench:** 14

**Square:** 14A

**Depth:** -0.70 cm

**Context:** debris layer (6<sup>th</sup> c. AD); above the column base

**Preservation:** fragmentary

**Description:** fragment of a goblet with completely preserved stem and base; small part of the bottom of the body also preserved; stem hollow on the upper half of its height; full base, without tubular ring; blowing spirals; pontil mark; slightly iridescent; smooth surface

**Transparency:** transparent

**Colour:** olive oil

**Bubbles:** large amounts; spherical and elongated (< 1 mm)

**Quality:** medium

**Height:** preserved 2.9 cm; foot 1.2 cm; stem 1.3 cm

**Diameter:**

- **Base:** 4.1 cm
- **Stem:** 0.9 cm
- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** 1 cm

**Thickness:** 0.4 cm (base); 0.15 cm (body wall)

**Type:** Isings form 111; Harden class VIIA (division III)

**Analogies:** Băjenaru, Băltăc 2006, cat. no. 25; Schwarzer 2009, Taf. 2, 33 ASKL; similar to: Gorin-Rosen 1999, RAM25, fig. 2, no. 25 (with tubular ring); Israeli 2003, 197, no. 236 (with tubular ring); Whitehouse 1997, 103-104, no. 154; 105, no. 156 (with tubular ring); Shalikadze, Kakhidze 2009, 370, fig. 3 (with tubular ring)

**5. Code:** HIS 16 CN (Fig. 1; 2/5; 3/5)

**Campaign:** 2016

**Trench:** 19

**Square:** 19C

**Depth:** - 0.15 m

**Context:** layer with mixed material

**Preservation:** fragmentary

**Description:** fragment of a goblet with completely preserved stem; small part of the base preserved; small part of the bottom of the body also preserved; funnel-shaped hollow stem; pontil mark; iridescent

**Transparency:** transparent

**Colour:** greenish tinge

**Bubbles:** large amounts; spherical (< 1 mm)

**Quality:** medium

**Height:** preserved 2.4 cm; stem 1.1 cm

**Diameter:**

- **Base:** not preserved
- **Stem:** 0.8 cm
- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** 0.9 cm

**Thickness:** 0.35 cm (base); 0.15 cm (body wall)

**Type:** Isings form 111

**Analogies:** similar to: Băjenaru, Băltăc 2006, cat. nos. 23, 87; Gorin-Rosen, Winter 2010, fig. 2.7; Golofast 2009, 317-318, fig. 16.12-13; Fünfschilling, Lafli 2013, Abb. 14, 78; Atik 2009, fig. 58; Czurda-Ruth 2007, Taf. 19, 652; Israeli 2003, 198, no. 237; Khrušková 2009, 343, fig. 24, 56-59

**6. Code:** HIS 13 CN (Fig. 1; 2/6; 3/6)

**Campaign:** 2013

**Trench:** 14/15 (baulk)

**Square:****Depth:** - 0.20 cm**Context:** layer with mixed material**Preservation:** fragment**Description:** fragment of a base encircled by tubular ring; pontil scar; iridescent; small amount of weathering patches**Transparency:** transparent**Colour:** greenish tinge**Bubbles:** large amounts; spherical (< 1 mm)**Quality:** medium**Height:** preserved 1.3 cm**Diameter:**

- **Base:** estimated 3.3-3.5 cm
- **Stem:** not preserved
- **Body:** not preserved
- **Rim:** not preserved
- **Pontil:** not preserved

**Thickness:** 0.35 cm (base and ring)**Type:** Isings form 111; Harden class VIIA (division III)

Analogies: similar to: Băjenaru, Bâltâc 2006, cat. nos. 24-26; Băjenaru, Bâltâc 2000-2001, pl. 9, no. 3.

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