

Making Roman Ribbed Bowls

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Outline

1. What are ribbed bowls?
2. 'Evidence as proof ' in researching methods
3. Some clues
4. Possible making technique: pinching and slumping
5. Conclusion
6. Literature

1. What are ribbed bowls?

Different types of ribbed bowls



Römisch-Germanisches Museum
Köln (F: Wiesenberg 2010)



Rheinisches Landesmuseum Trier (F: Wiesenberg 2010)



Glassammlung Hentrich Düsseldorf,
Sonderausstellung SpotOn 7 (F: Wiesenberg 2011)

1. What are ribbed bowls?



Rheinisches Landesmuseum Trier (F: Wiesenberger 2010)



Römisch-Germanisches Museum
Köln (F: Wiesenberger 2010)

Wide, shallow vessel form with pronounced ribs on the outside

Isings 3a/3b (Isings 1957), Trier Form 3a/3b (Goethert-Polaschek 1977), AR 2-1/2-2 (Rütti 1991)

1. What are ribbed bowls?

Characteristics:

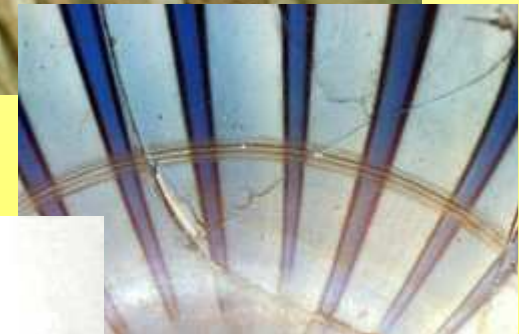
very thick walls

pronounced outer ribs

stepped, usually ground outer rim

ground inside, often 1 or 2 decorative grooves

often noticeable toolmarks



2. 'Evidence as proof' in researching methods

- a) Analysis
- b) Methods
- c) Testing in modern studio conditions
- d) Testing in authentic historical working conditions
- e) Practice to match the quality of Roman vessels
- f) Continuous evaluation of recent research

2. 'Evidence as proof' in researching methods

a) Analysis

- Roman vessels: chemical components
charakteristics
tool marks !!!
- possible tools and resources: resources for components
tools for manual working
furnaces and workshops
traditions
- literature

Postulation: The 'correct' method of making should show
and explain

ALL

noticeable features!



2. 'Evidence as proof' in researching methods

b) Possible methods

Theoretically ribbed bowls could be made by:

- free blowing and forming
- blowing into a basket-like mould
- pressing in or with a flat mould
- pressing in a basket-like mould
- free forming on a hemispherical mould during rotation
- free forming on a flat support and slumping over a hemispherical mould

2. 'Evidence as proof' in researching methods

c) Testing in modern studio conditions

- modern resources possible
- modern tools, furnaces and workshops possible
- comparison of the products with the characteristics and tool marks



Postulation: The 'correct' method of making should show
and explain

ALL

noticeable features!



2. 'Evidence as proof' in researching methods

d) Testing in 'authentic' historical working conditions

- only authentic (reconstructed) resources possible
- only authentic (reconstructed) tools, furnaces and workshops
- comparison of the products with the characteristics and tool marks



Postulation: The 'correct' method of making should show
and explain

ALL

noticeable features!



2. 'Evidence as proof' in researching methods

e) Practice to meet the quality of the Roman vessels

- Objects made in experiments should not stop at the stage of 'test objects'. The method should rather be practised until the objects match the quality of the Roman originals in order to enable detailed comparisons.

f) Continuous evaluation of recent research

- Even methods which appear to be proven need to be questioned, and, if necessary, updated or altered employing new research results!

3. Some clues

Irregular / uneven ribs

→ no mould was used
→ manual forming!



Rheinisches Landesmuseum Trier (F: Wiesenberg 2010)



Glassammlung Hentrich; SpotOn 7 (F: Wiesenberg 2011)

3. Some clues

Distribution of material

→ hints at making process



Clemens-Sels-Museum Neuss (F: Wiesenbergs 2010)

3. Some clues

Toolmarks near the end of the ribs

→ tools were used



Glassammlung Hentrich; SpotOn 7
(F: Wiesenberg 2011)

Villa Borg KL1987-25880 (F: Wiesenberg 2011)

3. Some clues

Toolmarks near the end of the ribs
Different lengths of ribs

→ tools were used
→ no mould was used
→ manual forming!



3. Some clues

Horizontal scratches and opened bubbles on the inside

→ grinding and polishing!



Augusta Raurica, Musuemskoffer (F: Wiesenberg 2007)



Clemens-Sels-Museum Neuss (F: Wiesenberg 2010)

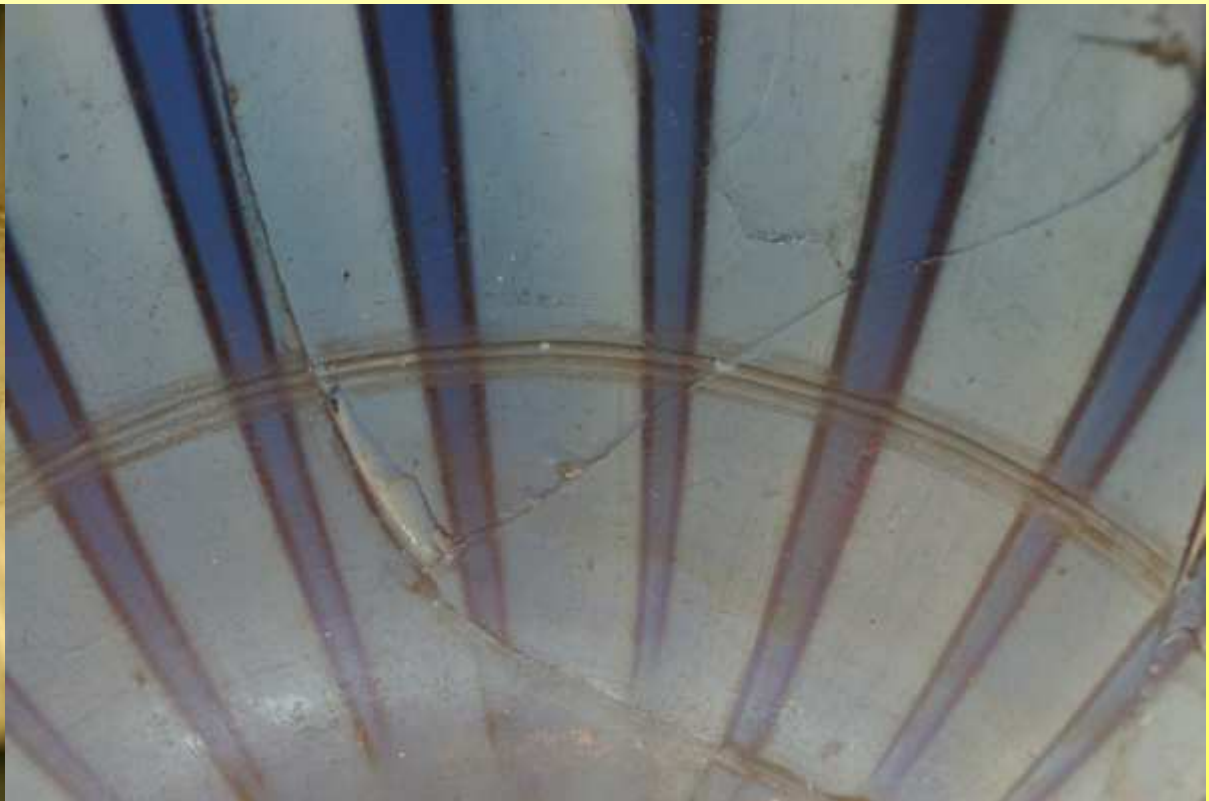
3. Some clues

Grinding marks and grooves on the inside

→ grinding and polishing!
with different grit sizes!



Clemens-Sels-Museum Neuss (F: Wiesenberg 2010)



Rheinisches Landesmuseum Trier (F: Wiesenberg 2010)

3. Some clues

Toolmarks and grinding marks near the rim

No grinding marks on the ribs or in between!

→ manual working in well defined zones!



Clemens-Sels-Museum Neuss
(F: Wiesenberg 2010)



Augusta Raurica, Musuemskoffer (F: Wiesenberg 2007)

3. Some clues

Profile shows small dent between the ribs

→ hints at working process



Augusta Raurica, Musuemschoffer (F: Wiesenberg 2007)

3. Some clues

Distortion of colour pattern on mosaic bowls → hints at working process!



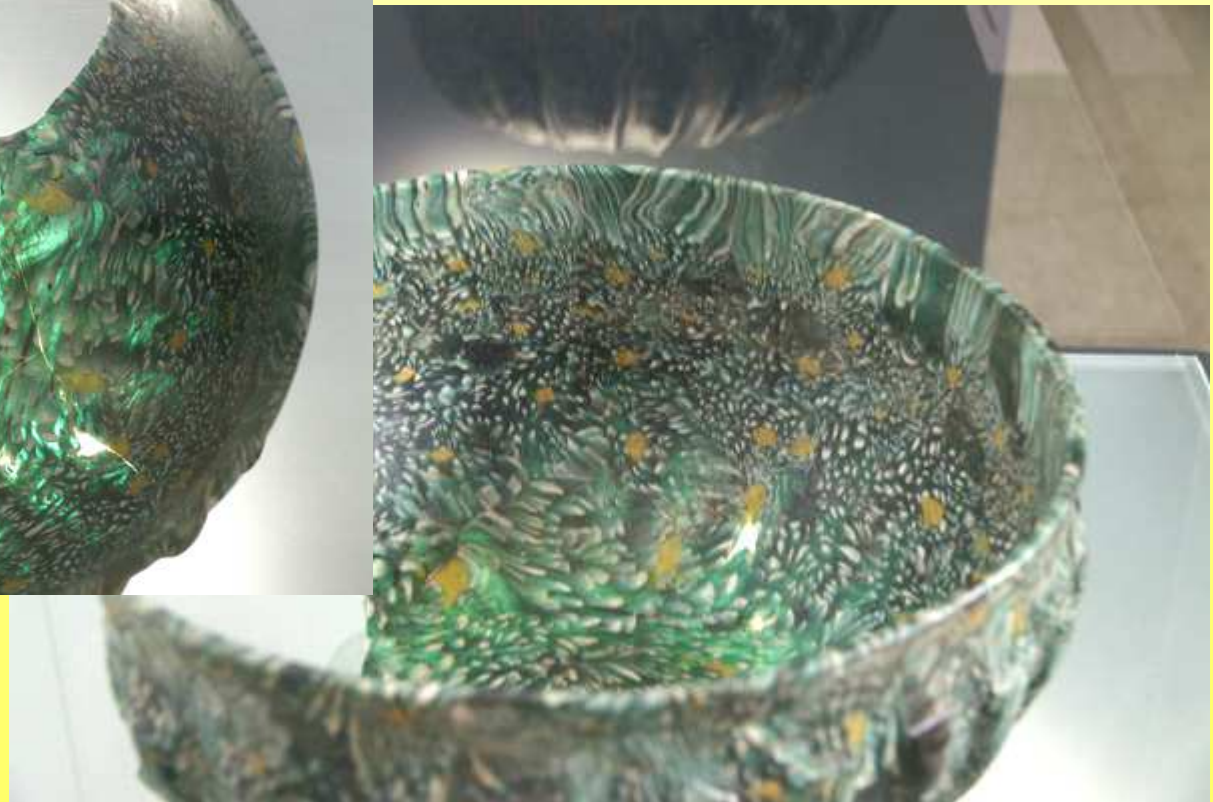
Villa Borg KL1993-6104 (F: Wiesenberg 2010)

Augusta Raurica, Musuemskoffer (F: Wiesenberg 2007)

Glassammlung Hentrich; SpotOn 7 (F: Wiesenberg 2011)

3. Some clues

Distortion of colour pattern on mosaic bowls → hints at working process!



Clemens-Sels-Museum Neuss (F: Wiesenberg 2010)

3. Some clues

Distortion of colour pattern
on mosaic bowls

- hints at working process!
- forming of ribs only on
the outside!



3. Some clues

Distortion of colour pattern
on mosaic bowls

- hints at working process!
- forming of ribs only on
the outside!

Assumption:

Monochrome ribbed bowls
were made using the same
method as polychrome
ribbed bowls.



3. Some clues

Many of the features seen on the originals help when investigating the method of manufacture.



Postulation: The "correct" method of making should show and explain

ALL

noticeable features!



4. Possible making technique: pinching and slumping

Evaluated experimentally by Mark Taylor and David Hill, not only under studio conditions!

Basis: specially mixed glass based upon Roman recipes

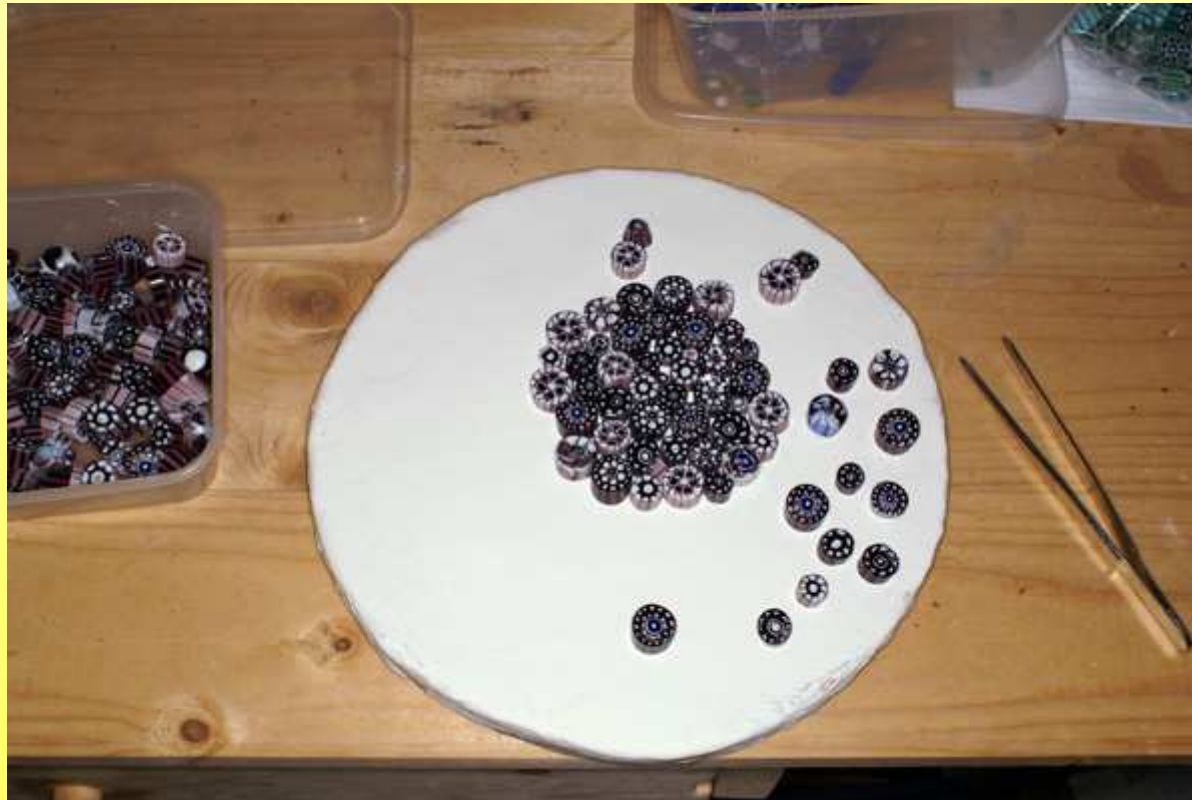
Two-stage production process:

1. hot working phase: pinching and slumping
2. cold working phase: grinding and polishing

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- making the polychrome disc (mosaic ribbed bowls only)



Ribbed bowl by Taylor / Hill 2009 (F: Wiesenberger 2009)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- making the polychrome disk (mosaic ribbed bowls only)



Ribbed bowl by Taylor / Hill 2009 (F: Wiesenberg 2009)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- if necessary: elongate the rim



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this PDF-summary

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- pinching the ribs with two pincer-like tools



Ribbed bowl by Taylor / Hill 2009 (F: Wiesenberger 2009)

6. Thesis 4: Forming by pinching and slumping

Hot working phase: pinching and slumping

- pinching the ribs with two pincer-like tools



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this PDF-summary

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- pinching the ribs with two pincer-like tools



Ribbed bowl by Taylor / Hill 2009 (F: Wiesenberg 2009)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- flattening of the rim → toolmarks!



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this PDF-summary

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- flattening of the rim

→ toolmarks!



Glassammlung Hentrich; SpotOn 7 (F: Wiesenberg 2011)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- flattening of the rim

→ toolmarks!



Villa Borg KL1987-25880 (F: Wiesenberg 2011)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- slumping over a hemispherical mould



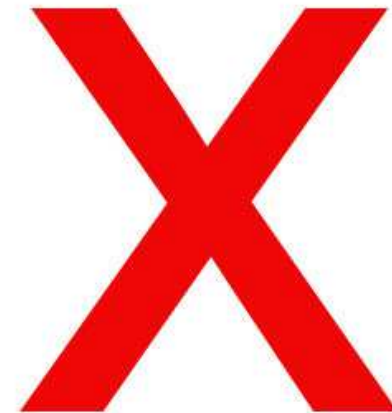
Ribbed bowl by Taylor / Hill 2009 (F: Wiesenberger 2009)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- slumping over a hemispherical mould

→ toolmarks!



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this PDF-summary

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- slumping over a hemispherical mould

→ toolmarks!



Ribbed bowl by Taylor / Hill 2003 (F: Wiesenberg 2013)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- end of hot working phase: toolmarks on semi-finished vessel

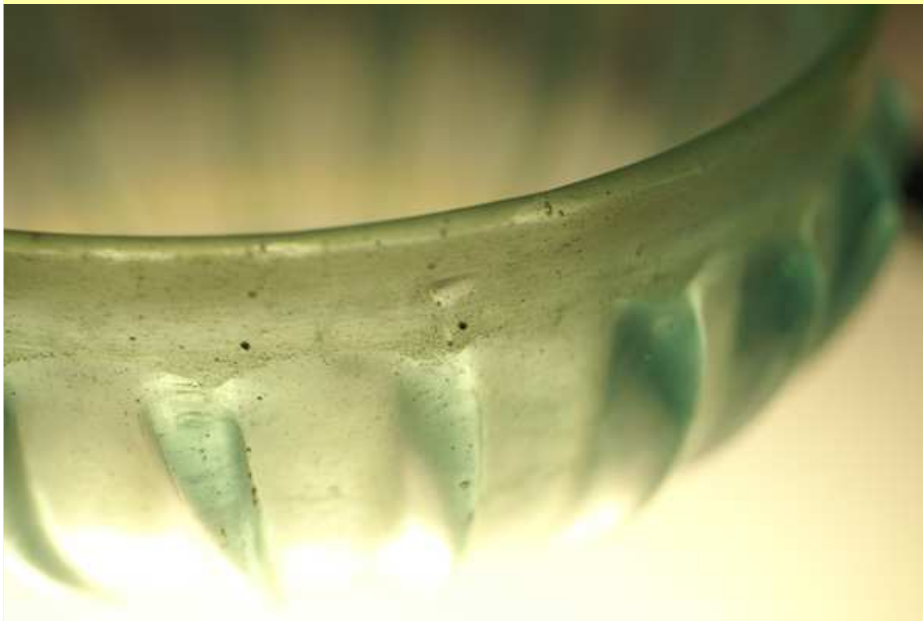


Ribbed bowl by Taylor / Hill / Wiesenberg
2004 / 2011 (F: Wiesenberg 2011)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- end of hot working phase: toolmarks on semi-finished vessel



Clemens-Sels-Museum Neuss (F: Wiesenberg 2010)



Ribbed bowl by Taylor / Hill / Wiesenberg
2004 / 2011 (F: Wiesenberg 2011)

4. Possible making technique: pinching and slumping

Hot working phase: pinching and slumping

- end of hot working phase: uneven rim on semi-finished vessel
mould material stuck to the inside
→ grinding necessary!



Ribbed bowl by Taylor / Hill 2009
(F: Wiesenberger 2009 / 2013)



4. Possible making technique: pinching and slumping

Cold working phase: grinding and polishing

- erasing the toolmarks on the rim



Ribbed bowl by Taylor / Hill / Wiesenbergs 2004 / 2011 (F: Hill 2011)

4. Possible making technique: pinching and slumping

Cold working phase: grinding and polishing

- erasing the toolmarks on the rim outside
- erasing the rest of the mould material inside



Ribbed bowl by Taylor / Hill / Wiesenberg 2004 / 2011 (F: Hill 2011)

4. Possible making technique: pinching and slumping

Cold working phase: grinding and polishing

- erasing the toolmarks and the rest of the mould material
- adding the decorative grooves



Ribbed bowl by Taylor / Hill / Wiesenberg 2004 / 2011 (F: Hill 2011)

4. Possible making technique: pinching and slumping

Cold working phase: grinding and polishing

- erasing the toolmarks and the rest of the mould material
- adding the decorative grooves

possible with sandstone, pumice and brick!



Ribbed bowl by Taylor / Hill / Wiesenberg 2004 / 2011 (F: Wiesenberg 2011)

4. Possible making technique: pinching and slumping

Disadvantage: time-consuming (irrelevant in Antiquity!)
no others!



Ribbed bowl by Taylor / Hill / Wiesenberg 2004 / 2011 (F: Wiesenberg 2013)

4. Possible making technique: pinching and slumping

Disadvantage: time-consuming (irrelevant in Antiquity!)
no others!



Ribbel bowl by Taylor / Hill 2004 (F: Wiesenbergh 2013)

5. Conclusion

According to current research, the method of forming by pinching and slumping is the only method to produce ribbed bowls which

- shows all noticeable marks
- explains all noticeable marks



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According to current research, the method of forming by pinching and slumping is the only method to produce ribbed bowls which

- shows all noticeable marks
- explains all noticeable marks
- can be conducted employing techniques available in Antiquity



5. Conclusion

According to current research, the method of forming by pinching and slumping is the only method to produce ribbed bowls which

- shows all noticeable marks
- explains all noticeable marks
- can be conducted employing techniques available in Antiquity
- repeatably and with economically justifiable effort produces results, which can be compared with the Roman ribbed bowls!



5. Conclusion

According to current research, the method of forming by pinching and slumping is the only method to produce ribbed bowls which

- shows all noticeable marks
- explains all noticeable marks
- can be conducted employing techniques available in Antiquity
- repeatably and with economically justifiable effort produces results, which can be compared with the Roman ribbed bowls!

→ **According to current research, Roman ribbed bowls were made by pinching and slumping.**

5. Conclusion



- According to current research, Roman ribbed bowls were made by pinching and slumping.

6. Literature

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Thank you very much for your interest.

Frank Wiesenberg, April/October 2013



IRM2013 – Frank Wiesenberg: Making Roman ribbed bowls - www.glasrepliken.de

**Invitation to experimental archeological projects at the
Roman glass furnace in the Archeological Park Roman Villa Borg (Germany)**



Thank you very much for your interest.

Frank Wiesenberg, April/October 2013

