

CELLSTAR® Cell Culture Microplates

Cell culture treated microplates are available in the following versions: 96, 384, 1536 well format

Properties

- Improved cell adhesion through physical surface treatment
- Compatible with automated systems. For further information concerning ANSI standards please visit our website: www.gbo.com/bioscience/technical_information
- Alphanumeric well coding

An overview of all 96 well, 384 well and 1536 well microplates listed in this catalogue can be found in the Technical Appendix → p. A 1 3 ff.

Detailed technical information on microplates
→ p. 2 1 2 ff. HTS microplates
→ p. 3 1 2 ff. Immunology
→ p. 14 1 4 Barcode labelling of microplates

Further literature on cell culture treated microplates
→ **Application Note “Establishing a cell culture assay based on TR-FRET for screening G-Protein-coupled receptors”** (F074 058)
→ **Application Note “Selection of cell culture surfaces for the adipogenic differentiation of hMSCs”** (F010 003)

96 Well Polystyrene Cell Culture Microplates

Cell culture treated 96 well microplates are available in the following versions:

- With U-, V- and F-bottom
- Clear, black and white
- Standard or half area microplates
- Black and white “clear bottom” plates (μClear®)
- Chimney well design, raised wells and condensation rings in lids prevent cross-contamination
- With or without lid
- Improved cell adhesion through physical surface treatment
- Barcode-labelled on request

Properties

- Lid enables gas exchange with minimal evaporation
- High clarity of the clear microplates for optimal microscopic examinations
- Stackable
- Alphanumeric well coding
- Individually wrapped peel-off bags
- Consecutive lot numbering

Well Profile

Depending on the application, the well profile is a key feature in a 96 well cell culture microplate. For further information and figures on the well profiles see → p. 2 1 6 f.

1. U-Bottom

The “U” describes the round bottom shape.

- No sharp corners to facilitate easy and residue-free pipetting
- Suitable for +/- analyses
- Working volume: 40 – 280 µl

2. V-Bottom

The “V” stands for the conically tapered well bottom.

- For precise pipetting
- Suitable for +/- analyses
- Working volume: 40 – 200 µl

3. F-Bottom / Standard (ST)

The “F” refers to the flat well bottom.

- Excellent optical properties
- For precise optical measurements
- For microscopic applications (bottom reading)
- Cell growth area: 32 mm²
- Working volume: 25 – 340 µl

4. F-Bottom / Chimney Well

The chimney well cell culture microplate has the same well profile as the standard F-bottom plate. The difference to the standard plate is the chimney-like arrangement of the wells i.e. each well stands on its own. Therefore the risk of contamination from sample material being carried over is minimised.

- Cell growth area: 34 mm²
- Working volume: 25 – 340 µl

μClear® / Solid Bottom

Clear bottom microplates have pigmented walls and a transparent thin film bottom, the so-called μClear® bottom. In contrast to our standard microplates with a solid polystyrene bottom, they are ideal for cell culture and microscopic applications using fluorescence or luminescence detection methods.

Half Area Microplates

For many applications, a reduction of the sample volume is an important feature. Beside high-format plates, the 96 well half area microplates offer an interesting alternative here. They can be pipetted automatically as well as manually without any problem and allow a reduction of the sample volume up to 50 %.

- Cell growth area: 15.0 mm²
- Working volume: 15 – 175 µl

Bulk Packaging
For selected products Greiner Bio-One also offers user-friendly bulk packaging (Fig. 1). Additional products are available in bulk pack upon request.

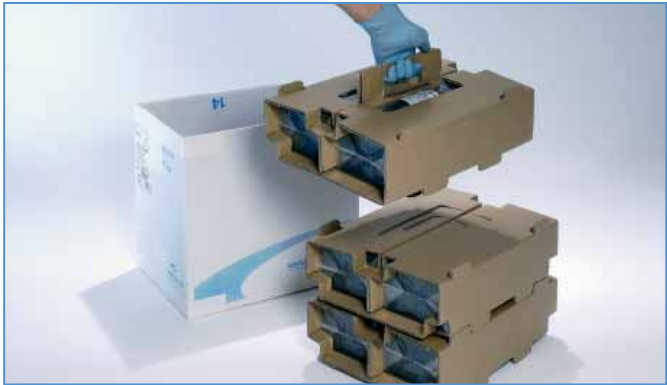
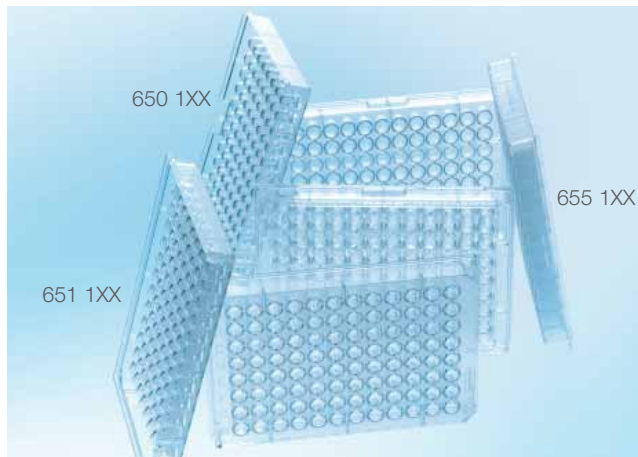


Figure 1: User-friendly bulk packaging



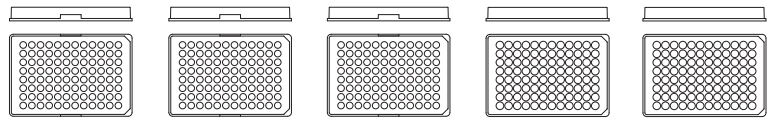
96 Well Polystyrene Cell Culture / Suspension Culture Microplates

solid bottom, clear

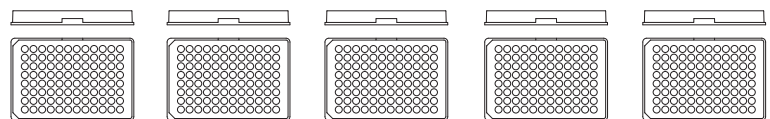
- 96 Well Microplates p. 2 | 7
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic

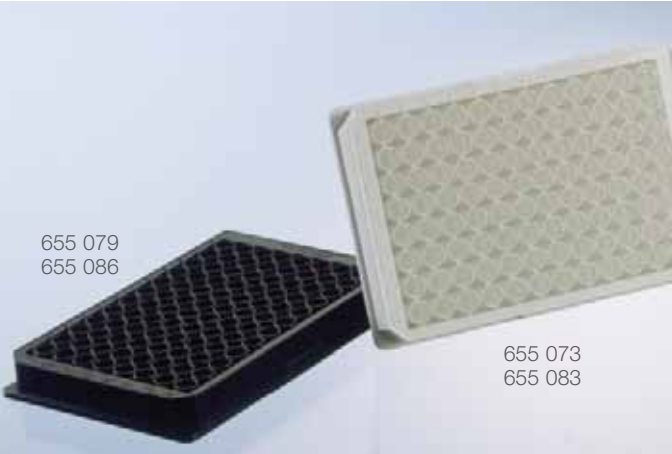


Cat.-No.	650 160	650 180	650 185	651 160	651 180
Well profile	U-bottom	U-bottom	U-bottom	V-bottom	V-bottom
Bottom	solid	solid	solid	solid	solid
Colour	clear	clear	clear	clear	clear
Growth area per well [mm²]	35	35	-	28	28
Working volume per well [µl]	40 – 280	40 – 280	40 – 280	40 – 200	40 – 200
TC surface treatment	+	+	-/suspension	+	+
Sterile	+	+	+	+	+
Lid	-	+	+	-	+
Quantity per bag/case	1/100	1/100	1/60	1/100	1/100



Cat.-No.	655 160	655 162	655 180	655 182	655 185
Well profile	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well
Bottom	solid	solid	solid	solid	solid
Colour	clear	clear	clear	clear	clear
Growth area per well [mm²]	34	34	34	34	-
Working volume per well [µl]	25 – 340	25 – 340	25 – 340	25 – 340	25 – 340
TC surface treatment	+	+	+	+	-/suspension
Sterile	+	+	+	+	+
Lid	-	-	+) with condensation rings	+) with condensation rings	+) with condensation rings
Quantity per bag/case	1/100	5/100	1/100	10/160	1/60

*) with condensation rings



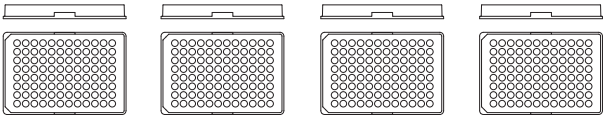
96 Well Polystyrene Cell Culture Microplates

solid bottom, white / black

- 96 Well Microplates p. 2 | 8
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic

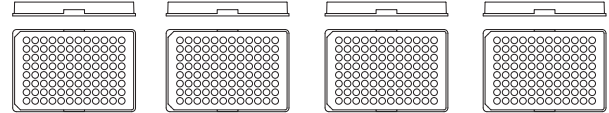


Cat.-No.	655 073	655 083	655 079	655 086
Well profile	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well
Bottom	solid	solid	solid	solid
Colour	white	white	black	black
Growth area per well [mm²]	34	34	34	34
Working volume per well [µl]	25 – 340	25 – 340	25 – 340	25 – 340
TC surface treatment	+	+	+	+
Sterile	+	+	+	+
Lid	-	+*)	-	+*)
Quantity per bag/case	10/40	8/32	10/40	8/32

*) with condensation rings

655 087
655 090655 088
655 098**96 Well Polystyrene Cell Culture Microplates****µClear®, white / black**

- 96 Well Microplates p. 2 | 8
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenicnon-
cytotoxic

Cat.-No.	655 088	655 098	655 087	655 090
Well profile	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well	F-bottom/ chimney well
Bottom	µClear®	µClear®	µClear®	µClear®
Colour	white	white	black	black
Growth area per well [mm²]	34	34	34	34
Working volume per well [µl]	25 – 340	25 – 340	25 – 340	25 – 340
TC surface treatment / Sterile	+ / +	+ / +	+ / +	+ / +
Lid	-	+*)	-	+*)
Quantity per bag/case	10/40	8/32	10/40	8/32

*) with condensation rings

2 HTS-
Microplates3 Immunology/
HLA4 Microbiology/
Bacteriology5 Tubes/Multi-
Purpose Beakers6 Liquid
Handling7 Molecular
Biology8 Protein
Crystallisation

9 Separation

10 Biochips/
Microfluidics11 Cryo-
Techniques12 Lids/Sealers/
CapMats13 Reaction Tubes/
Analyser Cups

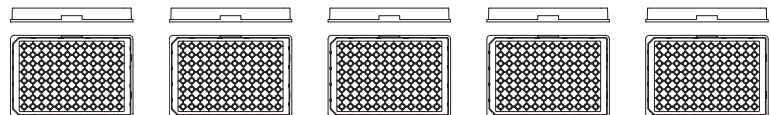
14 Accessories

675 090

675 098

96 Well Half Area Polystyrene Cell Culture Microplates**solid bottom, clear / white / black****µClear®, white / black**

- 96 Well Half Area Microplates p. 2 | 9

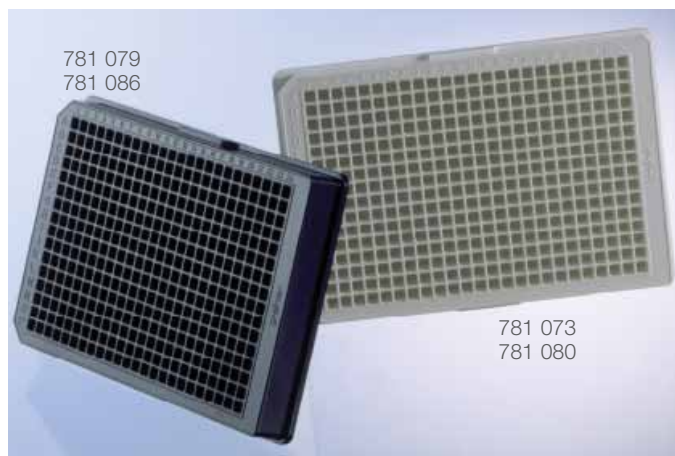
Free of detectable
DNase, RNase,
human DNA
non-pyrogenicnon-
cytotoxic

Cat.-No.	675 180	675 083	675 086	675 098	675 090
Well profile	half area	half area	half area	half area	half area
Bottom	solid	solid	solid	µClear®	µClear®
Colour	clear	white	black	white	black
Growth area per well [mm²]	15	15	15	15	15
Working volume per well [µl]	15 – 175	15 – 175	15 – 175	15 – 175	15 – 175
TC surface treatment / Sterile	+ / +	+ / +	+ / +	+ / +	+ / +
Lid	+	+	+	+	+
Quantity per bag/case	8/32	8/32	8/32	8/32	8/32

384 Well Polystyrene Cell Culture Microplates

384 well cell culture microplates are physically surface treated for improved cell adhesion and available in the following versions:

- Clear, white or black colour
- White or black "clear bottom" plates (μClear®)
- 384 well Small Volume™ HiBase and LoBase microplates
- Barcode-labelled on request (→ p. 14 | 4)



384 Well Polystyrene Cell Culture Microplates

solid bottom, clear / white / black

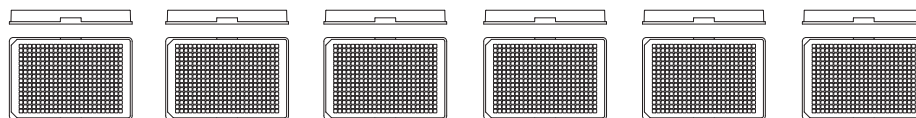
- 384 Well Microplates p. 2 | 13
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Properties:


- Lid enables gas exchange with the lowest possible evaporation
- High clarity of the clear microplates for optimal microscopic examinations
- Stackable
- Alphanumeric well coding

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic



Cat.-No.	781 165	781 182	781 073	781 080	781 079	781 086
Well profile	F-bottom	F-bottom	F-bottom	F-bottom	F-bottom	F-bottom
Bottom	solid	solid	solid	solid	solid	solid
Colour	clear	clear	white	white	black	black
Growth area per well [mm²]	10	10	10	10	10	10
Working volume per well [μl]	15 – 110	15 – 110	15 – 110	15 – 110	15 – 110	15 – 110
TC surface treatment	+	+	+	+	+	+
Sterile	+	+	+	+	+	+
Lid	-	+	-	+	-	+
Quantity per bag/case	10/40	8/32	10/40	8/32	10/40	8/32



781 090
781 091
781 092

781 093
781 098

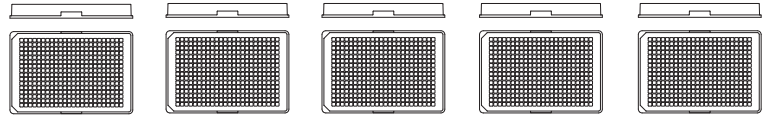
384 Well Polystyrene Cell Culture Microplates

μClear®, white / black


- 384 Well Microplates p. 2 | 14
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic



Cat.-No.	781 093	781 098	781 092	781 091	781 090
Well profile	F-bottom	F-bottom	F-bottom	F-bottom	F-bottom
Bottom	μClear®	μClear®	μClear®	μClear®	μClear®
Colour	white	white	black	black	black
Growth area per well [mm²]	10	10	10	10	10
Working volume per well [μl]	15 – 110	15 – 110	15 – 110	15 – 110	15 – 110
TC surface treatment	+	+	+	+	+
Sterile	+	+	+	+	+
Lid	-	+	-	+	+
Quantity per bag/case	10/40	8/32	10/40	8/32	20/120



788 092

788 093

784 086
784 080

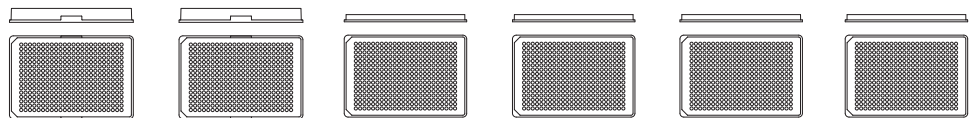
384 Well Small Volume™ HiBase/ LoBase Cell Culture Microplates

solid bottom, white / black
μClear®, white / black

- 384 Well Microplates p. 2 | 17

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic



Cat.-No.	784 080	784 086	788 073	788 086	788 093	788 092
Well profile	Small Volume™	Small Volume™	Small Volume™	Small Volume™	Small Volume™	Small Volume™
Bottom	solid	solid	solid	solid	μClear®	μClear®
Colour	white	black	white	black	white	black
Growth area per well [mm²]	2.7	2.7	2.7	2.7	2.7	2.7
Working volume per well [μl]	4 – 25	4 – 25	4 – 25	4 – 25	4 – 25	4 – 25
TC surface treatment	+	+	+	+	+	+
Sterile	+	+	+	+	+	+
Lid	+	+	-	+	-	-
Quantity per bag/case	8/32	8/32	10/80	15/60	10/80	10/80
Plate design	HiBase	HiBase	LoBase	LoBase	LoBase	LoBase

→ New

→ New

1536 Well Cell Culture Microplates

1536 well cell culture microplates are physically surface-treated for improved cell adhesion and available in the following versions:

- LoBase and HiBase version (→ p. 2 | 20 f.)
- Barcode-labelled on request (→ p. 14 | 4)
- In clear, white or black polystyrene
- As clear bottom variants (µClear®)

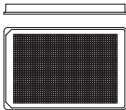
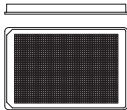
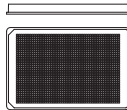
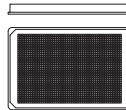
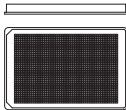


1536 Well Cell Culture Microplates HiBase

- 1536 Well Microplates p. 2 | 20
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic

					
Cat.-No.	782 180	782 073	782 080	782 078	782 086
Well profile	F-bottom	F-bottom	F-bottom	F-bottom	F-bottom
Bottom	solid	solid	solid	solid	solid
Colour	clear	white	white	black	black
Growth area per well [mm²]	2.3	2.3	2.3	2.3	2.3
Working volume per well [µl]	3 – 10	3 – 10	3 – 10	3 – 10	3 – 10
TC surface treatment	+	+	+	+	+
Sterile	+	+	+	+	+
Lid	+	-	+	-	+
Quantity per bag/case	1/32	15/60	10/40	15/60	10/40
Plate design	HiBase	HiBase	HiBase	HiBase	HiBase

		
Cat.-No.	782 093	782 092
Well profile	F-bottom	F-bottom
Bottom	µClear®	µClear®
Colour	white	black
Growth area per well [mm²]	2.3	2.3
Working volume per well [µl]	3 – 10	3 – 10
TC surface treatment	+	+
Sterile	+	+
Lid	-	-
Quantity per bag/case	15/60	15/60
Plate design	HiBase	HiBase

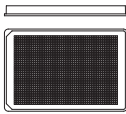
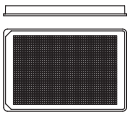


1536 Well Cell Culture Microplates LoBase

- 1536 Well Microplates p. 2 | 21
- Sealers, Lids and CapMats p. 12 | 2 ff.
- Barcode Labelling p. 14 | 4

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic



Cat.-No.	783 093	783 092
Well profile	F-bottom	F-bottom
Bottom	µClear®	µClear®
Colour	white	black
Growth area per well [mm²]	2.3	2.3
Working volume per well [µl]	3 – 10	3 – 10
TC surface treatment	+	+
Sterile	+	+
Lid	-	-
Quantity per bag/case	15/60	15/60
Plate design	LoBase	LoBase

1536 Well SCREENSTAR Microplate

The increasing significance of High-Content Screening (HCS), which means the microscopic analysis of cells, cell growth and cell signalling in drug discovery, created a new demand for specialised microplates with excellent optical features.

To fulfill the expectations of researchers in this field of application, Greiner Bio-One developed the 1536 well SCREENSTAR microplates as a new product line especially suited for advanced microscopy in drug discovery.

Applications:

- For automated microscopy in drug discovery such as high-content screening applications
- For fluorescence measurements in classical high-throughput microplate readers
- Suitable for all microscopic applications such as fluorescence microscopy, confocal fluorescence microscopy and bright field microscopy

Features:

- 190 µm cycloolefin film bottom for optimum resolution even with higher magnifications
- Recessed film bottom for better access with high magnification lenses (Fig. 1)
- Low background especially in the lower UV
- Smooth microplate top absent of alphanumeric coding facilitates flush lid mounting

- Excellent cell attachment and cell growth due to cell culture treatment
- High optical quality and minimal contamination with dust and particles due to a clean room like production of the film and the microplate
- Innovative packaging for improved protection of the microplates and film bottom

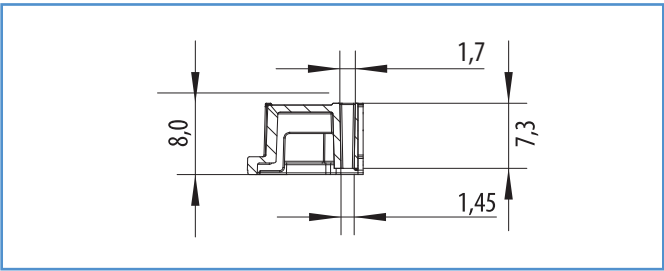
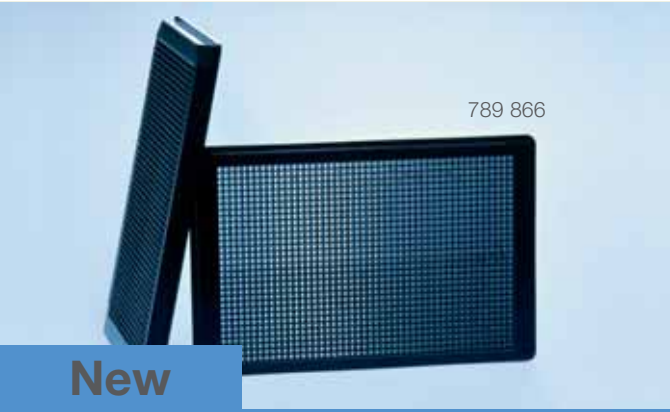


Figure 1: Well profile: 1536 well SCREENSTAR microplate
Total volume: 17.8 µl
Working volume: 3 - 15 µl
Growth area: 2.1 mm²
Film bottom thickness: 190 µm
Distance inner well bottom to microplate rim: 0.7 mm
Distance outer well bottom to microplate rim: 0.51 mm



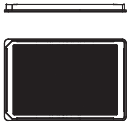
New

Free of detectable
DNase, RNase,
human DNA
non-pyrogenic

non-
cytotoxic

1536 Well SCREENSTAR Microplate

- Non-sterile, non-treated version (Cat.-No. 789 896) available on request
- 1536 Well Microplates p. 1 | 18 and 2 | 20
- 1536 Well SensoPlate™ p. 2 | 35
- Barcode Labelling p. 14 | 4



Cat.-No.	789 866
Well format	1536 well
Well profile	F-bottom
Bottom	CO film
Colour	black
Growth area per well [mm²]	2.1
Working volume per well [µl]	3 – 15
TC surface treatment	+
Sterile	+
Lid	-
Quantity per bag/case	17/68