

Abstrich- und Transportsysteme für die Präanalytik FLÜSSIG / GEL / TROCKEN



M40-A2
COMPLIANT

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Σ-TRANSWAB® RANGE - TUPFER MIT FLÜSSIGEM TRANSPORTMEDIUM



Für den Lebendtransport von Aerobiern, Anaerobiern und anspruchsvollen Organismen:

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	MEDIUM	GEEIGNET FÜR	ARTIKELNR.
Σ-Transwab®	Standard	Schaumstoff	Plastik	1ml Amies	Wunden, Haut, Rachen	MW176S
Σ-Transwab®	Standard	Schaumstoff	Plastik	2ml Amies	Wunden, Haut, Rachen	MW176S2ML
Σ-Transwab® DUO ENT	1x Std., 1x Mini	Schaumstoff	Plastik	1ml Amies	Wunden, Haut, Rachen	MW176SE2
Σ-Transwab® PurFlock®	Standard	Flock	Plastik	1ml Amies	Wunden, Haut, Rachen	MW176PF
Σ-Transwab® Mini-Tip	Mini	Schaumstoff	Plastik	1ml Amies	Nasopharynx, Pädiatrie, Urogenitaltrakt	MW177S
Σ-Transwab® Mini-Tip PurFlock®	Mini	Flock	Plastik	1ml Amies	Nasopharynx, Pädiatrie, Urogenitaltrakt	MW177PF
Σ-Transwab® Ultrafine-Tip PurFlock®	Ultrafein	Flock	Plastik	1ml Amies	Nasopharynx, Pädiatrie, Urogenitaltrakt	MW178PF
Σ-Transwab® DUO MRSA	2x Standard	Schaumstoff	Plastik	1ml Amies	MRSA Screening, Wunden, Haut, Rachen	MW167S
Σ-Transwab® Triple MRSA	3x Standard	Schaumstoff	Plastik	1ml Amies	MRSA Screening, Wunden, Haut, Rachen	MW176S3
Fecal Transwab®	Standard	Schaumstoff	Plastik	2ml Cary Blair	Rektum	MW168S
Fecal Transwab® PurFlock®	Standard	Flock	Plastik	2ml Cary Blair	Rektum	MW168PF

Für den Lebendtransport von Viren, Chlamydien, Mykoplasmen, Ureaplasmen und Neisseria gonorrhoeae:

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	MEDIUM	GEEIGNET FÜR	ARTIKELNR.
Σ-VCM™	Standard	Schaumstoff	Plastik	1ml UTM	Respirationstrakt, Wunden, Haut	MW910S
Σ-VCM™ PurFlock®	Standard	Schaumstoff	Plastik	2ml UTM	Respirationstrakt, Wunden, Haut	MW910PF2ML



SNAP 'N' CAP

Nach Verwendung des Tupfers wird dieser in das Röhrchen geführt und an der Sollbruchstelle abgebrochen. Beim Zuschrauben des Röhrchens wird der Tupfer automatisch im Deckel fixiert und kann somit beim erneuten Öffnen des Röhrchens kontaktfrei entnommen werden. Geeignet für die automatisierte und die konventionelle Verarbeitung.

Für die selektive Gewinnung von *Staphylococcus aureus* (Σ -TSB™) bzw. *Streptococcus agalactiae* (Σ -GBS™):

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	MEDIUM	GEEIGNET FÜR	ARTIKELNR.
Σ -TSB™ w/ 6.5% NaCl	Standard	Schaumstoff	Plastik	2ml Tryptic Soy Broth	MRSA Screening, Nase, Rachen, Haut	MWTSB65
Σ -GBS™	Standard	Schaumstoff	Plastik	2ml Lim Broth	Vagina, Rektum	MWGBS
Σ -GBS™ PurFlock®	Standard	Flock	Plastik	2ml Lim Broth	Vagina, Rektum	MWGBSPF

Für den anschließenden Einsatz von PCR und Kultur bei Viren:

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	MEDIUM	GEEIGNET FÜR	ARTIKELNR.
Σ -Virocult®	Standard	Schaumstoff	Plastik	1ml VCM	Respirationstrakt, Wunden, Haut	MW951S
Σ -Virocult® ENT	Mini	Schaumstoff	Plastik	1ml VCM	Respirationstrakt, Wunden, Haut	MW951SENT
Σ -Virocult® DUO	2x Standard	Schaumstoff	Plastik	1ml VCM	Respirationstrakt, Wunden, Haut	MW951S2
Σ -Virocult® PurFlock®	Standard	Schaumstoff	Plastik	1ml VCM	Respirationstrakt, Wunden, Haut	MW951PF
Σ -Virocult®	Standard	Schaumstoff	Plastik	2ml VCM	Respirationstrakt, Wunden, Haut	MW950S
Σ -Virocult® ENT	Mini	Schaumstoff	Plastik	2ml VCM	Respirationstrakt, Wunden, Haut	MW950SENT
Σ -Virocult® DUO	2x Standard	Schaumstoff	Plastik	2ml VCM	Respirationstrakt, Wunden, Haut	MW950S2
Σ -Virocult® PurFlock®	Standard	Schaumstoff	Plastik	2ml VCM	Respirationstrakt, Wunden, Haut	MW950PF

Für den anschließenden Einsatz von PCR und Kultur bei Viren (ohne Tupfer):

NAME	MEDIUM	GEEIGNET FÜR	ARTIKELNR.
Selenite Broth	2ml Selenite Broth	Selektive Gewinnung von Salmonella species	MWSEL
Σ -MM™ (Molecular Medium)	1.5ml Molecular Medium	Inaktiviert zuverlässig Pathogene und konserviert DNA und RNA für Folgeanalysen	MWMM
Σ -SP™ (Sputum)	1ml Mucolytic Reagent	Schnelle Verflüssigung von Sputum für Folgeanalysen	MWSP

Mini-Tip mit Sollbruchstelle



Standard-Tip mit Sollbruchstelle



Standard-Tip ohne Sollbruchstelle, ergänzend vorhanden im Σ -Transwab® DUO und Triple





TRANSWAB® RANGE TUPFER MIT GEL-TRANSPORTMEDIUM

VERFÜGBARKEIT:

Alle **Transwab®** Geltupfer sind mit und ohne Kohle verfügbar.

Die **Kohle** im Medium neutralisiert toxische Stoffe in der Probe und erleichtert somit das anschließende Wachstum anspruchsvoller Bakterien wie z.B. *Neisseria gonorrhoeae*.

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	GEEIGNET FÜR	ARTIKELNR.
Amies Medium	Standard	Rayon	Plastik	Wunden, Haut, Urogenitaltrakt, Rachen	MW170
Amies Medium w/ Charcoal	Standard	Rayon	Plastik	Wunden, Haut, Urogenitaltrakt, Rachen	MW171
Amies Medium w/ Charcoal	Standard	Rayon	Plastik	Wunden, Haut, Urogenitaltrakt, Rachen, 3-fach verpackt	MW175C
Amies Medium	Fein	Rayon	Fester Draht	Ohr, Urogenitaltrakt	MW172P
Amies Medium w/ Charcoal	Fein	Rayon	Fester Draht	Ohr, Urogenitaltrakt	MW172C
Amies Medium	Mini	Rayon	Flex. Draht	Nasopharynx, Pädiatrie	MW173P
Amies Medium w/ Charcoal	Mini	Rayon	Flex. Draht	Nasopharynx, Pädiatrie	MW173C
Cary Blair Medium	Standard	Rayon	Plastik	Rektum, fäkale Proben	MW168
Stuart's Medium	Standard	Rayon	Plastik	Wunden, Haut, Urogenitaltrakt, Rachen	MW165P
Stuart's Medium w/ Charcoal	Standard	Rayon	Plastik	Wunden, Haut, Urogenitaltrakt, Rachen	MW165C

FLOCK



Flock besteht aus einer Schicht winziger multifilamentierter Polyesterfasern mit unterschiedlichen Längen. Dadurch wird eine Oberflächenvergrößerung erreicht, die eine erhöhte Materialaufnahme ermöglicht. Die Fähigkeit zur Aufnahme und Abgabe ist anderem Faser-material überlegen.

RAYON



Rayon ist eine Zelluloseform, die keine Fettsäuren und andere Substanzen enthält, die ggf. inhibierend auf Bakterienwachstum wirken könnten. Der Einsatz von Rayon ist nachweislich für die anschließende Durchführung molekularer Tests hervorragend geeignet.

SCHAUMSTOFF



Schaumstoff besteht aus einem regelmäßigen zellförmigen Gitter, das hervorragend Mikroorganismen in flüssiger Umgebung aufnehmen kann. Wie ein Schwamm lässt Schaumstoff das Material ohne Restriktionen im Inneren „fließen“ und gibt seinen Inhalt auch vollständig wieder frei.

POLYESTER (DACRON)



Polyester ist ein vollständig synthetisches Material, das bei speziellen molekularen Tests empfohlen wird. Durch seine nicht-biologische Beschaffenheit sind nachweislich keine Interferenzen mit Viren und Bakterien zu beobachten.



DRYSWAB® RANGE

TROCKENTUPFER

OHNE MEDIUM

VERFÜGBARKEIT:

Alle Dryswab® Trockentupfer sind steril einzeln mit **labeled tubes** verpackt oder steril einzeln in **peel pouches** verpackt.

NAME	KOPFTYP	KOPF MATERIAL	STAB MATERIAL	FLEXIBEL	SOLLBRUCHSTELLE	ARTIKELNR. „LABELED TUBE“	ARTIKELNR. „PEEL POUCH“
Dryswab®	Standard	Rayon	Plastik	Nein	Nein	MW1021	MW112
Dryswab®	Fein	Rayon	Plastik	Ja	Nein	MW100	MW113
Dryswab® ENT	Mini	Rayon	Flex. Draht	Ja	Nein	MW140	MW153
Dryswab® ENT	Mini	Rayon	Fester Draht	Nein	Nein	MW142	MW151
Dryswab® Pernasal	Mini	Rayon	UltraFlex. Draht	Ja	Nein	MW160	MW155
Dryswab®	Standard	Polyester	Plastik	Nein	Nein	MW1021D	MW112D
Dryswab® ENT	KMini	Polyester	Fester Draht	Nein	Nein	MW142D	MW151D
Sigma Swab®	Standard	Schaumstoff	Plastik	Nein	Nein	MW941	MW940
Sigma Swab® Duo	2x Standard	Schaumstoff	Plastik	Nein	Nein	MW942	MW944
Sigma Swab®	Mini	Schaumstoff	Plastik	Ja	Bei 85mm	MW946	MW943
Sigma Swab® Duo	1x Standard	Schaumstoff	Plastik	Nein/Ja	Nein/85mm	-	MW945
	1x Mini						
PurFlock®	Standard	Flock	Plastik	Nein	Bei 80mm	MW830	MW810
PurFlock®	Standard	Flock	Plastik	Ja	Bei 80mm	MW831	MW811
PurFlock®	Mini	Flock	Plastik	Ja	Bei 100mm	MW833	MW813
PurFlock®	Mini	Flock	Plastik	Ja	Nein	MW832	MW812
PurFlock®	Mini	Flock	Plastik	Ja	Bei 100mm	MW834	MW814
Dryswab®	Standard	Baumwolle	Holz	Nein	Nein	MW1041	MW108*
Dryswab®	Groß	Baumwolle	Holz	Nein	Nein	MW104J	-
Dryswab®	Standard	Dacron	Plastik	Ja	Bei 79mm	-	MW012
Dryswab®	Standard	Rayon	Plastik	Ja	Bei 79mm	-	MW015

*) Verfügbar in Einzel- und Mehrfachverpackungen zu 1, 2, 5, 10 und 20 Stück

STUDIEN UND LITERATUR

Laughlin, J. - Microbiology collection device and ISO15189: an appropriate selection - Bacteriology - 2017

ZIEL

Assessment of the performance of a range of swab collection devices with regards to the loss of bacterial viability during significant holding period following sampling. Is subsequent recovery by culture compromised? Transport swab systems investigated:

- MWE Transwab® Amies Gel w/ charcoal (M40)
- Deltalab Amies Gel Swab w/ charcoal
- Copan M40 transport swab Amies Gel w/ charcoal
- Copan non-M40 transport swab Amies Gel w/ charcoal
- TSC Probackt Amies Gel w/ charcoal
- Sarstedt Amies Gel w/ charcoal

ERGEBNISSE

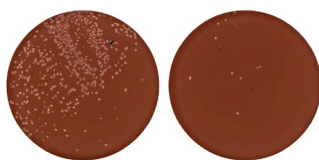
The data presented here clearly demonstrate the superior performance of two brands of collection devices, Copan M40-compliant and MWE M40-compliant, in recovery of fastidious organisms such as *w. N. gonorrhoeae* and *H. influenzae*. Overall, all collection devices evaluated appeared to have similar bacterial release at time point zero. Additional concerns have arisen concerning non-viable Gram-negative organisms found in the transport media of Sarstedt and Deltalab collection devices.

SCHLUSSFOLGERUNGEN

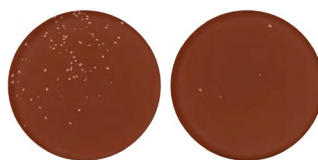
This study illustrates the loss of viability during any significant holding period that compromises recovery. This loss of viability certainly varies significantly between different collection devices. This has significant implications in public health as fastidious organisms or less-robust strains may be underrepresented in the sampled population. In such cases, laboratories may need to assess the suitability of molecular methods for detection of these organisms.



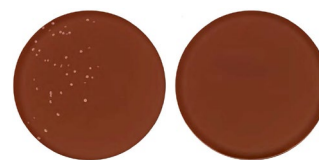
MWE Transwab®:
Neisseria gonorrhoeae held for 24 h and 48 h at 4°C.



Sarstedt device:
Neisseria gonorrhoeae held for 24 h and 48 h at 4°C.



Copan M-40:
Neisseria gonorrhoeae held for 24 h and 48 h at 4°C.



Copan non M-40:
Neisseria gonorrhoeae held for 24 h and 48 h at 4°C.

Laughlin, J. - Efficacy of two commercially available liquid transport collection devices - Poster at the Biomedical Science Congress 2019

ZIEL

Evaluation of the performance of Copan 480C eSwab™ and Medical Wire MW176S Σ-Transwab® as widely used liquid transport collection devices with regards to their ability to maintain the viability of fastidious strains of clinically significant bacteria and to look at potential overgrowth with *Pseudomonas*.

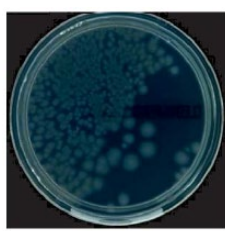
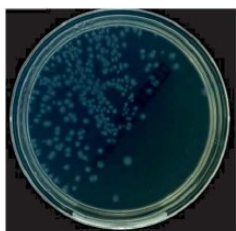
ERGEBNISSE

The two systems differed in the recovery rates for *Streptococcus pneumoniae* and *Neisseria gonorrhoeae*. Σ-Transwab® demonstrated enhanced recovery rates at the various parameters: *Streptococcus pyogenes*, *Pseudomonas aeruginosa*, *Streptococcus pneumoniae*, *Neisseria gonorrhoeae*, and *Staphylococcus aureus*.

SCHLUSSFOLGERUNGEN

Copan eSwab™ suffered from significant overgrowth of *Pseudomonas aeruginosa* as a factor of time. There was complete overgrowth in a mixed culture with *Streptococcus pneumoniae* such that colonies could not be detected due to the overgrowth by *Pseudomonas*.

Bacteria and swab type		Bacterial recovery (CFU) average of 3			
	Temperature	0 hr.	24hr	48hr	Compliant
<i>Pseudomonas aeruginosa</i> ATCC 27853					
Sigma Transwab® MW176S	RT	>250	>230	>250	Yes
	4°C	>250	>210	>180	
Copan Diagnostics 480C eSwab®	RT	>250	>250	>250	Overgrowth?
	4°C	>250	>250	>250	



Pseudomonas aeruginosa RT for 24hrs

Laughlin, J. - Molecular efficacy of two commercially available liquid transport collection devices for downstream testing on the GeneXpert® Platform and the Roche FLOW® system - Poster at the European Meeting on Molecular Diagnostics 11th Edition 2019

Day	eSwab			Σ-Transwab® Foam			Σ-Transwab® PurFlock			Σ-Virocult®		
	Target Flu A	Average CT	Median CT	Target Flu A	Average CT	Median CT	Target Flu A	Average CT	Median CT	Target Flu A	Average CT	Median CT
1	Inhibited	-	27.83	Detected	24.11	24.39	Detected	23.72	23.78	Detected	22.73	22.68
2	Detected	28.17		Detected	24.11		Detected	23.74		Detected	22.68	
3	Detected	27.64		Detected	24.40		Detected	23.89		Detected	22.59	
4	Inhibited	-		Detected	24.57		Detected	23.73		Detected	22.60	
5	Detected	27.62		Detected	24.43		Detected	23.79		Detected	22.70	
	Target Flu B	Average CT	Median CT	Target Flu B	Average CT	Median CT	Target Flu B	Average CT	Median CT	Target Flu B	Average CT	Median CT
1	Inhibited	-	29.70	Detected	25.12	24.82	Detected	24.20	24.07	Detected	23.01	23.01
2	Detected	29.67		Detected	24.65		Detected	23.88		Detected	23.00	
3	Detected	29.97		Detected	24.98		Detected	24.06		Detected	23.09	
4	Inhibited	-		Detected	24.89		Detected	23.89		Detected	22.97	
5	Detected	29.55		Detected	24.66		Detected	24.31		Detected	22.93	
	Target RSV	Average CT	Median CT	Target RSV	Average CT	Median CT	Target RSV	Average CT	Median CT	Target RSV	Average CT	Median CT
1	Inhibited	-	28.58	Detected	23.48	23.44	Detected	23.24	23.40	Detected	22.69	22.58
2	Detected	28.86		Detected	22.94		Detected	23.38		Detected	22.46	
3	Detected	28.58		Detected	22.84		Detected	23.30		Detected	22.64	
4	Detected	-		Detected	23.73		Detected	23.48		Detected	22.44	
5	Detected	28.08		Detected	23.37		Detected	23.75		Detected	22.60	

Day	eSwab			Σ-Transwab® Foam			Σ-Transwab® PurFlock			Σ-Virocult®		
	Target Staphylococcus aureus	Average CT	Median CT	Target Staphylococcus aureus	Average CT	Median CT	Target Staphylococcus aureus	Average CT	Median CT	Target Staphylococcus aureus	Average CT	Median CT
1	Detected	23.07	23.09	Detected	17.87	17.86	Detected	16.69	16.47	Detected	16.17	16.25
2	Detected	23.20		Detected	17.89		Detected	16.42		Detected	16.10	
3	Detected	23.13		Detected	17.89		Detected	16.43		Detected	16.26	
4	Detected	22.98		Detected	17.88		Detected	16.51		Detected	16.29	
5	Detected	23.08		Detected	18.02		Detected	16.56		Detected	16.30	
	Target Neisseria gonorrhoeae	Average CT	Median CT	Target Neisseria gonorrhoeae	Average CT	Median CT	Target Neisseria gonorrhoeae	Average CT	Median CT	Target Neisseria gonorrhoeae	Average CT	Median CT
1	Inhibited	-	18.52	Detected	17.56	17.44	Detected	16.91	16.94	Detected	15.44	15.32
2	Detected	18.50		Detected	17.15		Detected	16.96		Detected	15.53	
3	Detected	18.71		Detected	17.51		Detected	16.99		Detected	15.39	
4	Detected	18.68		Detected	17.49		Detected	17.01		Detected	15.34	
5	Inhibited	18.37		Detected	17.53		Detected	16.91		Detected	15.24	
	Target Streptococcus pyogenes	Average CT	Median CT	Target Streptococcus pyogenes	Average CT	Median CT	Target Streptococcus pyogenes	Average CT	Median CT	Target Streptococcus pyogenes	Average CT	Median CT
1	Detected	20.48	20.44	Detected	20.10	19.98	Detected	18.59	19.56	Detected	17.95	17.76
2	Detected	20.28		Detected	19.92		Detected	18.69		Detected	17.43	
3	Detected	20.43		Detected	19.90		Detected	18.89		Detected	17.90	
4	Detected	20.37		Detected	20.10		Detected	19.77		Detected	17.73	
5	Detected	20.90		Detected	19.49		Detected	19.56		Detected	17.64	

Khan, K. - An investigation of the compatibility of a new molecular transport medium (Σ-MM™) with a PCR analytical platform - Poster at the European Meeting on Molecular Diagnostics 11th Edition 2019

Table 1. CRE findings on Cepheid GeneXpert® PCR using Sigma Transwab®

Dilution	Samples tested for each organism	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours
10-1	2	IMP-1	Detected	VIM	Detected	OXA-48	Detected	KPC	Detected	NDM	Detected
10-2	2	Detected	Moderate Growth	Detected	Moderate Growth	Detected	Moderate Growth	Detected	Moderate Growth	Detected	Moderate Growth
10-3	2	Detected	Scanty Growth	Detected	Scanty Growth	Detected	Scanty Growth	Detected	Scanty Growth	Detected	Scanty Growth

Table 2. CRE findings on Cepheid GeneXpert® PCR using Sigma MM™

Dilution	Samples tested for each organism	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours	Target	Incubation culture growth results after 18 hours
10-1	2	IMP-1	Detected	VIM	Detected	OXA-48	Detected	KPC	Detected	NDM	Detected
10-2	2	Detected	No Growth	Detected	No Growth	Detected	No Growth	Detected	No Growth	Detected	No Growth
10-3	2	Detected	No Growth	Detected	No Growth	Detected	No Growth	Detected	No Growth	Detected	No Growth

ZIEL

Evaluation of the performance of Copan eSwab™, Medical Wire Σ-Transwab® Foam tip and Σ-Transwab® PurFlock® tip for the transport and maintenance of Influenza A H3N2 Virus, Influenza B Virus, Respiratory Syncytial Virus (RSV-A) Type A, Staphylococcus aureus ATCC 25923, Streptococcus pyogenes ATCC 12344 and Neisseria gonorrhoeae ATCC 43069 for molecular testing, and to compare its performance with the gold standard transport medium for viruses: Medical Wire Σ-Virocult®.

ERGEBNISSE

There is a significant difference in molecular performance between eSwab™ and MWE's Σ-Transwab®, Σ-Transwab® PF and Σ-Virocult®. All MWE devices are able to detect all targets with significantly lower CT values, meaning MWE devices have greater sensitivity and will give lower limits of detection on molecular platforms.

SCHLUSSFOLGERUNGEN

The Σ-Transwab® Foam tip and Σ-Transwab® PurFlock® tip are a truly open swab platform suitable for automation. gram stains, traditional culture, and molecular assays. The study has highlighted a number of potential issues with the Copan eSwab™ in a direct comparison to the Σ-Transwab® Foam tip and the Σ-Transwab® PurFlock® tip.

ZIEL

Demonstration of the compatibility of samples collected and inactivated with Σ-MM™ for testing on the Cepheid GeneXpert PCR Platform. The study was conducted in two phases: Phase 1: Σ-MM™ and Σ-Transwab® devices were spiked with specific dilutions of MRSA. Phase 2: Σ-MM™ and Σ-Transwab® devices were spiked with specific dilutions of CRE organisms (specific target sequences).

ERGEBNISSE

From the samples inoculated into Σ-MM™, nothing was recovered by culture, but all gave positive and correct results with GeneXpert (even low concentrations). From the samples inoculated into Σ-Transwab®, all were correctly recovered by culture, with the amount of growth appropriate to the concentration, and all gave positive and correct results with GeneXpert.

SCHLUSSFOLGERUNGEN

Sample collected and stored in Σ-MM™ are compatible with GeneXpert. Σ-MM™ is effective at completely killing the sample, thus rendering it non-infectious. Σ-MM™ retains high quality bacterial DNA. Σ-Transwab® is also fully compatible with GeneXpert, and gave positive results even at low concentrations of target organisms.



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