



HUMANCHEMIE

Competence in Research and Practice

Dental-Programme

Prophylaxis and dental hygiene

Cavity and stump prevention

Endodontic treatment

*All you need for tooth preservation
since 1975*

The motto of our company „All you need for tooth preservation!“...



Dr. Constanze Knappwost-Gieseke,
Managing Director

...means to preserve the natural teeth as long as possible. All of our products have been developed based on this principle since the foundation of the company on the 6th of November in 1975.

Most of our products are original developments of my father Prof. Dr. Dr. h. c. A. Knappwost (universities of Hamburg and Tübingen). Due to his research and developments we have important knowledge in dental medicine about the properties of marginal concentrations of copper ions.

From the beginning, these convincing therapeutic effects of traces of copper ions were systematically used in our preparations.

The range of products and the company have grown over the time. The preservation of the teeth is still our goal. The focus of the family-run company is also the quality and service orientation. The certification according to DIN EN ISO 13485:2016 guarantees a consistently high quality „made in Germany“.

Our consulting team will be glad to answer all of your questions regarding application and effectiveness of our products. Furthermore, we will inform you about our training and exhibition dates. We are looking forward to welcoming you to our satisfied customers.




On behalf of the
Humanchemie team
Yours sincerely,

C. Knappwost-Gieseke



Your team of the Humanchemie GmbH

PROPHYLAXIS AND DENTAL HYGIENE

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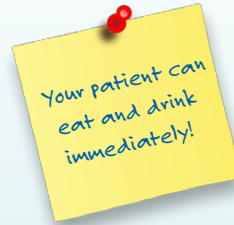


Tiefenfluorid®

Two steps to success

- Tooth neck desensitisation
- Mineral fissure sealing*
- White spots disappear**
- Caries prophylaxis also at hardly reachable areas

* ZMK 1-2/1999, ** ZMK 9/1995



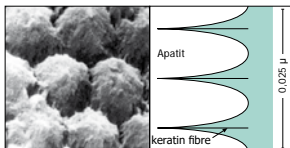
Classical **HCH Tiefenfluorid®** without added flavour, especially for allergic person



Ingredients:

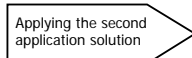
1st application solution: magnesia-fluoro-silicate, copper-II-fluoro-silicate, sodium fluoride (as stabilizer), distilled water
 2nd application solution: Calciumhydroxid-hochdispers, methylcellulose, distilled water

Step 1



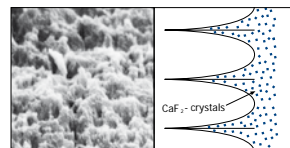
By applying the first application solution with a soaked cotton pellet or brush the texture of the dental enamel is layed open and the complex fluor- and copper-ions enter deep into the funnels of the dental enamel.

Step 2



The second application solution also enters deep and causes immediately a reaction in the depth of the dental enamel.

Result



Submicroscopic calciumfluorid of a size of 50 Å has filled the funnels of the loosened enamel homogeneously. There it acts for a long period secured against abrasion.



Tiefenfluorid® junior

Two steps to success

- Tooth neck desensitisation
- Mineral fissure sealing*
- White spots disappear**
- Caries prophylaxis also at hardly reachable areas
- Fruity sweet with xylitol

* ZMK 1-2/1999, ** ZMK 9/1995



Ingredients:

1st application solution: magnesia-fluoro-silicate, copper-II-fluoro-silicate, sodium fluoride (as stabiliser), xylitol, sucralose, strawberry aroma nat., distilled water.
2nd application solution: Calciumhydroxid-hochdispers, methylcellulose, distilled water.

HCH Tiefenfluorid®

Trial package:

5 ml 1st application solution and 5 ml 2nd application solution in bottles with dropper inserts
UDI: 110693325357

Economy package:

20 ml 1st application solution and 20 ml 2nd application solution in bottles with dropping pipettes
UDI: 110693324791

HCH Tiefenfluorid® junior

Trial package:

5 ml 1st application solution and 5 ml 2nd application solution in bottles with dropper inserts
UDI: 111006758387

Economy package:

20 ml 1st application solution and 20 ml 2nd application solution in bottles with dropping pipettes
UDI: 111006760871

Indication:

Caries prophylaxis – also with brackets
Tooth neck desensitisation
Mineral fissure sealing

Tip:

Also tasty for adults.

The 2nd application solution is available as a single package.

To avoid drying-out of the 2nd application solution, clean the lip of the bottle carefully and close it tight!



Easy. Double. Good.

Tiefenfluorid® *balance*



- Caries prophylaxis and protection against periodontitis in one
- Shake it, apply it, done
- Long-lasting depot effect
- Mineral fissure sealing



Ingredients:

1st application solution: magnesia-fluoro-silicate, copper-II-fluoro-silicate, sodium fluoride (as stabiliser), distilled water
2nd application solution: Calciumhydroxid-hochdispers, copper(II) sulphate, calcium sulphate, copper(II) hydroxide, methylcellulose, distilled water

Tiefenfluorid® *balance*

Trial package:

5 ml 1st application solution and 5 ml 2nd application solution in bottles with dropper inserts
UDI: 111743965101

Economy package:

20 ml 1st application solution and 20 ml 2nd application solution in bottles with dropping pipettes
UDI: 111743964535

Indication:

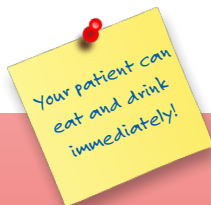
Local fluoridation for tooth neck desensitization, for mineral fissure sealing and for caries prophylaxis, in addition it supports periodontitis treatment.

Tip:

When using  Tiefenfluorid® *balance* periodontitis treatment is supported.

Tip:

The 2nd application solution *balance* is available as a single package.



Prophylaxis and dental hygiene

2nd application solution / 2nd application solution *balance*

2nd application solution

For 2nd application after using 1st application solution of **Tiefenfluorid®** and **Tiefenfluorid® junior**. It can also be used after application of the 1st application solution of **Dentin-Versiegelungsliquid** as well as a mixing liquid for **Atacamit-Wurzelfüllzement**.



Ingredients:
Calciumhydroxid-hochdispers, methylcellulose, distilled water

2nd application solution *balance*

For 2nd application after using 1st application solution of **Tiefenfluorid® *balance***. It can also be used after application of the 1st application solution of **Tiefenfluorid®** and **Tiefenfluorid® junior**.



Ingredients:
Calciumhydroxid-hochdispers, copper(II) sulphate, calcium sulphate, copper(II) hydroxide, methylcellulose, distilled water

Nachtouchierlösung

Single package:

20 ml 2nd application solution in bottles with dropping pipettes
UDI: 111743959132

Nachtouchierlösung *balance*

Single package:

20 ml 2nd application solution in bottles with dropping pipettes
UDI: 111751980616

Tip:

If the 2nd application solution dries up a bit, you can add a few drops of distilled water. (Ph. Eur.; pharmaceutical goodness) into the bottle.

Tip:

The 2nd application solution *balance* offers additional support for periodontitis therapy.

Shake well before use!

Note: The second application solution *balance* cannot be used as a mixing liquid for **Atacamit Wurzelfüllzement** or as a second application solution for **Dentin-Versiegelungsliquid**.

Cupral®

Approved in endodontics and periodontology

- Fast healing even without antibiotics
- Selective dissolving of the pocket epithelium with membrane formation
- Germ reduction with long-term effect by pH-value stabilization
- Approved as broadband therapeutic agent without resistance developments



Ingredients:

Calciumhydroxid-hochdispers, copper(II) sulphate, calcium sulphate, copper(II) hydroxide, methylcellulose, distilled water



Cupral® combines the proven properties of calcium hydroxide with a germ reducing force. Different ways of reaction and a special reaction process result in a permanent, polyvalent antiseptic effect. Due to membrane formation **Cupral®** thereby is harmless for uninfected tissue material.

Cupral®

5 g paste in a bottle

UDI: 110693329966

15 g paste in a bottle

UDI: 110693328276

Syringe with 1,7 g paste and 5 cannulas

UDI: 1110693330760

Indication:

**For root treatment with and without
Depotphorese® as medicinal insert**

For indirect pulp capping

For augmentative treatment of periodontic diseases

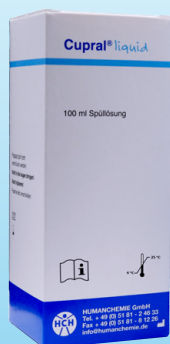
Tip:

If the consistency of the **Cupral®** is too viscous it can be adjusted with a few drops of distilled water.

The paste cannulas of the syringe facilitate the application in the pocket. However, normally they are too large for the root treatment.

Cupral® liquid... ... the solution

- Effective rinsing solution
- Useful in canal and pocket
- Safe pH-value stabilization
- Free of antibiotics and CHX



Ingredients:

Calciumhydroxid-hochdispers, copper(II) sulphate, calcium sulphate, copper(II) hydroxide, methylcellulose, distilled water

Different reaction paths of the **Cupral® liquid** and a special regeneration process lead to a permanent, polyvalent germ-reducing effect. **Cupral® liquid** is tissue-friendly compared to non-infected material due to membrane formation.

Cupral® liquid

100 ml solution in a bottle
with injection insert
UDI: 111743963969

Indication:

**Root treatment with and without
Depotphorese® (canal rinsing before and
after treatment) for all kinds of teeth
Rinsing of periodontic pockets and / or
treatment of Gingivitis simplex.**

Tip:

Cupral® liquid is ready to use and should not be diluted.
Before each use, the **Cupral® liquid** has to be shaken up.

Hämostatikum Al-Cu

*Stops bleedings and
reduces germs*

- Stops sustainable capillary bleedings of the gingiva, the skin and the pulp
- For a clean and bloodless scaling
- No interactions with lots of impression materials
- Germ reducing - minimizes the risk of bacteraemia



Ingredients:
Aluminium chloride,
copper-II-chloride, distilled water.



Acts by coagulation and suspends capillary bleedings of the gingiva, the skin and the pulp immediately.

Hämostatikum Al-Cu provides clean, bloodless scaling and dental clearance and reduces the risk of introducing germs into the organism.

Active ingredients: Aluminium and copper salts with small, fast diffusing anions, adstringent and disinfecting. The solution should be advantageously applied with slight pressure with a cotton wool pad, a cotton wool thread respectively with a paper edge on the bleeding area.

Wide spread indication in dentistry, also for treatments of residual pulpitis.

Hämostatikum Al-Cu:

20 ml liquid in a bottle
with dropper insert
UDI: 110693327613

Indication:

To stop minor bleeding
of the oral mucosa and the pulp.
Side effect: germ reduction

Dental hygiene accessories

Replacement cannulas for Cupral® and Calciumhydroxid hochdispers syringe:

Plastic bag with 10 pieces
Pack of 100 pieces



Retraction cord dispenser 7 m cotton thread, not impregnated, one-hand operation and refillable

Retraction cord dispenser with spool
optionally in the strengths fine, medium or strong



Refill spool for retraction cord dispenser
optionally in the strengths fine, medium or strong

Patient information brochures

(available in German and Polish, free of charge)
Set of 25 pcs.

incl. display or to fill up

for  Tiefenfluorid®,  Tiefenfluorid® junior and  Tiefenfluorid® *balance* or for Depotphorese®.



Kavitäten-Waschliquid

For an optimum prearrangement

- Cleans, degreases and dries
- Easy and safe removing of previous plastic fillings
- Slight pain reduction by cooling



Ingredients:

Acetone, dichloromethane, 2-propyl-alcohol,
copper(II) chloride dihydrate

The basis for a long-lasting conservation of a restoration is not only choosing and processing the optimum material, but also the careful prearrangement. For an efficient cleaning after the preparation **Kavitäten-Waschliquid** is the preferred mean. **Kavitäten-Waschliquid** acts grease- and humidity-dissolving. Not only the rests of previous plastic fillings are removed safely but also the complete grease and humidity residues from rinsing and drilling.

Kavitäten-Waschliquid:

liquid in a bottle
with dropper insert
UDI: 111743962279

Indication:

For degreasing and drying of cavities and
crown stumps.

Tip:

Kavitäten-Waschliquid is flammable. Plastic
fillings nearby should be secured against solving
during the treatment.

Dentin-Versiegelungsliquid

Just in case

- Prevents sensitivities
- Long-lasting protection of the pulp
- Safe preservation of secondary caries and caries relapses
- Replaces underfilling in case of plastic fillings



Ingredients:

1st application solution: magnesium hexafluorosilicate,
copper(II) sulphate, sodium fluoride (as stabiliser),
distilled water

2nd application solution: Calciumhydroxid-hochdispers
methylcellulose, distilled water



The copper doped deep-penetration fluoridation with **Dentin-Versiegelungsliquid** offers highest protection against secondary caries and caries relapses. Sealing of the dentine canals is effected by a simple two- step application. A valuable side-effect is the production of secondary dentine. A careful application of the cavity could replace the underfilling in case of plastic fillings. The application has to be carried out before etching and bonding, whose effects are not affected.

Dentin-Versiegelungsliquid

Trial package:

5 ml 1st application solution and 5 ml 2nd application solution
in bottles with dropper inserts

UDI: 111743957903

Economy package:

20 ml 1st application solution and 20 ml 2nd application solution
in bottles with dropping pipettes

UDI: 111743958566

Indication:

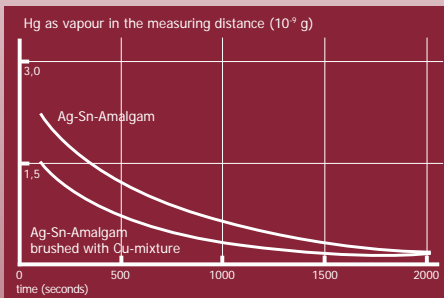
Prevention of secondary caries.

**Underfilling are not required for plastic fillings
(Etching and bonding are not affected).**

Kavitätenspalt-Dichtungsmixtur

Permanent sealing of marginal gaps

- Reliable sealing of marginal gaps
- Reduces the mercury vapour of fresh amalgam fillings towards the dentine
- Especially for metal fillings and crowns



Ingredients:
Acetone, dichloromethane, 2-propyl-alcohol, copper powder micron, polyvinylpyrrolidone, glycerol

Kavitätenspalt-Dichtungsmixtur uses for metal fillings and crowns the advantages of the copper amalgam without its disadvantages. The mixing liquid with activated metallic copper is applied directly onto the cavity or the crown stump before placing the (metal) filling. With the saliva during a few weeks the activated copper will be transformed in basic copper compounds. These are more voluminous, germ reducing and fix the filling firmly. Any generated marginal gaps are permanently and germ reduced sealed.

Kavitätenspalt-Dichtungsmixtur was especially developed for metal fillings and crowns can also be used for tooth-coloured materials, if any dark edges which may occur do not interfere.

Kavitätenspalt-Dichtungsmixtur

20 ml mixing liquid in a bottle
with dropper insert
UDI: 111743961616

Indication:
For prevention of secondary caries
especially for metal fillings and crowns.

Tip:
Shake well before use!

Interims-Kronenzement

*Alkaline underfill and
curative cement*

- For temporary applying crowns and light bridges
- As pulpa soothing underfilling
- Free of eugenol
- Mix with distilled water



Ingredients:

Ternary calcium oxide calcium silicate calcium aluminate cement body, kaoline, magnesium hexafluorosilicate, copper oxychloride

Our alkaline cements bind slowly with forming calcium hydroxide. According to the low strength they are easy to remove. The alkaline calcium hydroxide environment paralyzes initial inflammatory stimuli and stimulates the dentin formulation. After hardening the germ reducing effect of copper ions is retained. The cement body forms a long-term barrier against bacteria.

Interims-Kronenzement

20 g powder in a bottle with dosing device
(includes measuring spoon and dropper)
UDI: 111751979822

Indication:

For the temporary placement of crowns and light bridges. For soothing the pulpa irritated by preparation or by noxa.

Tip:

The consistency of the *Interims-Kronenzement* could be adjusted by the amount of added water. Mixing tests are useful before the first use.

Atacmit-Wurzelfüllzement

Long-lasting antiseptic root filling

- For definite filling after root treatment
- Reduces the risk of re-infection caused by marginal gaps
- X-ray opaque
- Mixing liquid is attached



Ingredients:

Cement powder: ternary calcium oxide calcium silicate calcium aluminate cement body, cerium(IV) oxide, titanium dioxide, copper oxychloride, magnesium hexafluorosilicate, polyvinyl pyrrolidone
Mixing liquid: Calciumhydroxid-hochdispers, methylcellulose, distilled water

Slow hardening calcium hydroxide cement of low consistency. It shows the alkalinity of calcium hydroxide but also a significantly higher germ reducing effect without the development of resistance

Atacmit-Wurzelfüllzement supplies a bacteria-proof occlusion in the lower segment of the canal which is tight for bacteria of the oral cavity. In cases a pin insertion is needed, the Atacmit-Wurzelfüllzement has to be removed in the area of the pin. With x-ray contrast. Easy to remove.

Atacmit-Wurzelfüllzement:

10 g powder and 20 ml mixing liquid
in bottles with dropping pipette
UDI:111743953391

Indication:

For definitive filling after each kind of root treatment.

Tip:

If the mixing liquid is empty before the powder then the 2nd application solution for **Tiefenfluorid®** and **Dentin-Versiegelungsliquid™** can be used alternatively.

Cupral® / Cupral® liquid

Excellent individually,
unbeatable together!



Ingredients:

Calciumhydroxid-hochdispers, copper(II) sulphate,
calcium sulphate, copper(II) hydroxide, methylcellulose,
distilled water

Different reaction paths and a special regeneration process lead to a permanent, polyvalent germ-reducing effect. Cupral® and Cupral® liquid are tissue-friendly compared to non-infected material due to membrane formation.

Indication Cupral®:

For root treatment with and without
Depotphorese® as medical insert
For indirect pulp capping
For augmentative treatment of periodontic diseases

Indikation Cupral® liquid:

Root treatment with and without
Depotphorese® (canal rinsing before and
after treatment) for all kinds of teeth
Rinsing of periodontic pockets and / or
treatment of Gingivitis simplex.

Tip:

The paste cannulas of the syringe facilitate the application in the pocket. However, normally they are too large for the root treatment.

Tip:

Cupral® liquid is ready to use and should not be diluted.

Shake well before use!

Calciumhydroxid-hochdispers

Highly active and ready to use

- Pure calcium hydroxide paste
- Highly active with an optimum pH > 12.4
- Retains its full effect also after opening the bottle
- Ready to use
- Due to membrane formation it is harmless
for uninfected tissue material



Ingredients:

Calcium hydroxide – highly dispersed,
methylcellulose, distilled water

High dispersity through own production process: 1 g Calciumhydroxid-hochdispers has a surface of approx. 30 m². Pure calcium hydroxide paste which shows the properties of pure calcium hydroxide in its optimal form, pH 12.4 – 13. It is suitable for the implementation of alkaline pulp capping (direct capping) as well as for root treatment in case of broad foramen apical (juvenile teeth) or as filling after a vital extirpation. It is recommended to use Cupral® in all other cases as it has a significant higher disinfecting capacity. For anterior teeth a mixture of 90 % Calciumhydroxid-hochdispers and 10 % Cupral® is recommended in order to avoid possible darkening.

Calciumhydroxid-hochdispers:

15 g paste in a bottle

UDI: 111743955647

Syringe with 1.7 g paste and 5 cannulas

UDI: 111743956213

Indication:

For direct pulp capping.

For root treatment with and without

Dephotphorese® if Cupral® is not preferred.

Tip:

If the consistency of the Calciumhydroxid-hochdispers might be too viscous it can be adjusted with a few drops of distilled water.

Depotphorese® with Cupral®

The integral alternative
in endodontics

Its success is based on the effect of the Cupral®, which is transported from a small depot in the root canal entrance using an electric field through all arms of the apical delta. This weak electric current is located exclusively in the patient's oral cavity.



Fig. 1: Position of the electrodes

Due to the electric field between the needle electrode (negative pole), which dips into the root canal and the clamp electrode (positive pole), which is applied to the buccal mucosa (see Fig.1), the active ingredients of the Cupral are driven through the entire canal system including all side canals up to the apical outputs. With this method root canals, that cannot be prepared especially those of the molars, can be treated.



Indication:

For integral root treatment according to Knappwost also gangrenous, herded, vitally exterpirted, crowned or pre-treated teeth and teeth which root canals cannot be fully prepared mechanically, can be treated with this method.

Note:

Currently we are in progress with the development of the latest Depotphorese® apparatus generation.

Endodontic treatment Depotphorese®

Through the electric field colloides (here copper hydroxide) and the hydroxocuprate anion are transported (Fig.2).

The depotphorese® treatment is usually held in two or three sessions. During the first session a discharge of the periapical area will be reached. The hydroxyl- and hydroxocuprate anions pass through the entire apical area. The resulting sterile oligopeptides are transported electrophoretically to the apex to be assimilated resp. these oligopeptides rise as foam upwards due to electroosmotic suction. After the last session the entire canal system is coated by Cupral®. In the apical outputs long-term effective copper hydroxide stimulates the osseous closure (Fig.3).

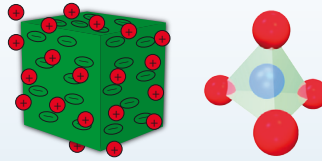


Fig.2: Presentation of the active ingredients: left copper hydroxide as colloid, right hydroxocuprat-anion consisting of: copper-II⁺ und OH⁻ ion

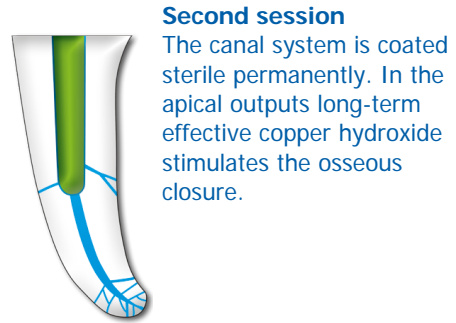
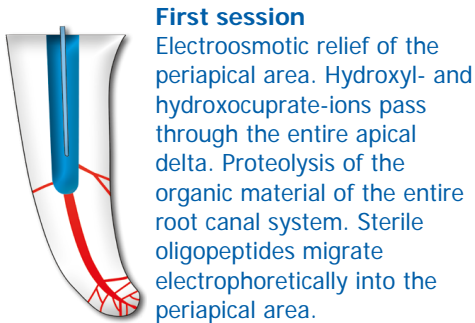


Fig. 3

Note:

Cupral® is not radiopaque. The definitive root filling should be carried out with Atacamit-Wurzelfüllzement an radiopaque and alkaline cement.

Depotphorese® -equipment

Depotphorese® tool holder
UDI: 111751917276



(root canal-) needle electrode
UDI: 111751920326



(cheek-) hook electrode
UDI: 111751916613



(cheek-) clamp electrode
UDI: 111751919532

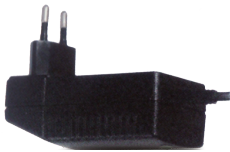


cable either with cinch plug for all other types of models
UDI: 111751918966

or with green unique plug for MAGIS®

Further standard equipment for the Depotphorese® -system MAGIS®

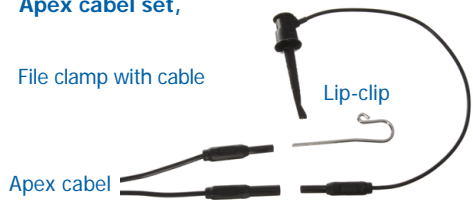
Main cable,



Apex cabel set,

File clamp with cable

Apex cabel



Optional equipment for the Depotphorese®-system MAGIS®

Angle piece,



Motor,



Fußschalter,

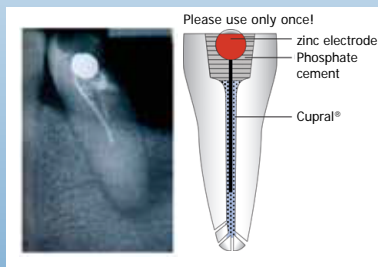


All equipment parts are available separately.

Galvanisches Stiftelement

The mobile long-time Depotphorese®

- Easy to apply
- Also to continue treatments started by a Depotphorese® apparatus
- Time-saving treatment in cases of high root canal resistances



The Depotphorese® with Cupral® is a minimal invasive alternative in endodontics. The success of this method is based on the effect of the Cupral® which is transported from a small depot in the root canal entrance into all arms of the apical delta by an electrical field. This weak electrical field is only located in the oral cavity of the patient.

Galvanisches Stiftelement

Package with 5 pcs.
UDI: 111754904938

Indication:

For longtime-Depotphorese® with Cupral®.

Tip:

The galvanic pin element can easily be adapted to the root canal length.



Family business since 1975



HUMANCHEMIE

Competence in Research and Practice

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