



TISSUE ENGINEERING

DECELLULARIZATION TECHNIQUES
FOR TISSUES AND ORGANS

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Norway grants



OBJECTIVES

organs

graphs

gels

Tissue-Engineered Tracheal Replacement in a Child: A 4-Year Follow-Up Study

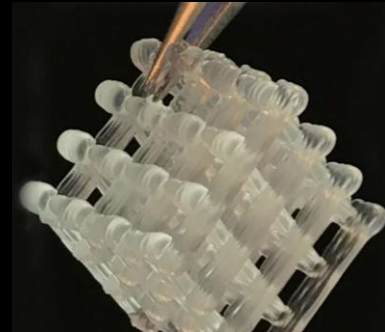
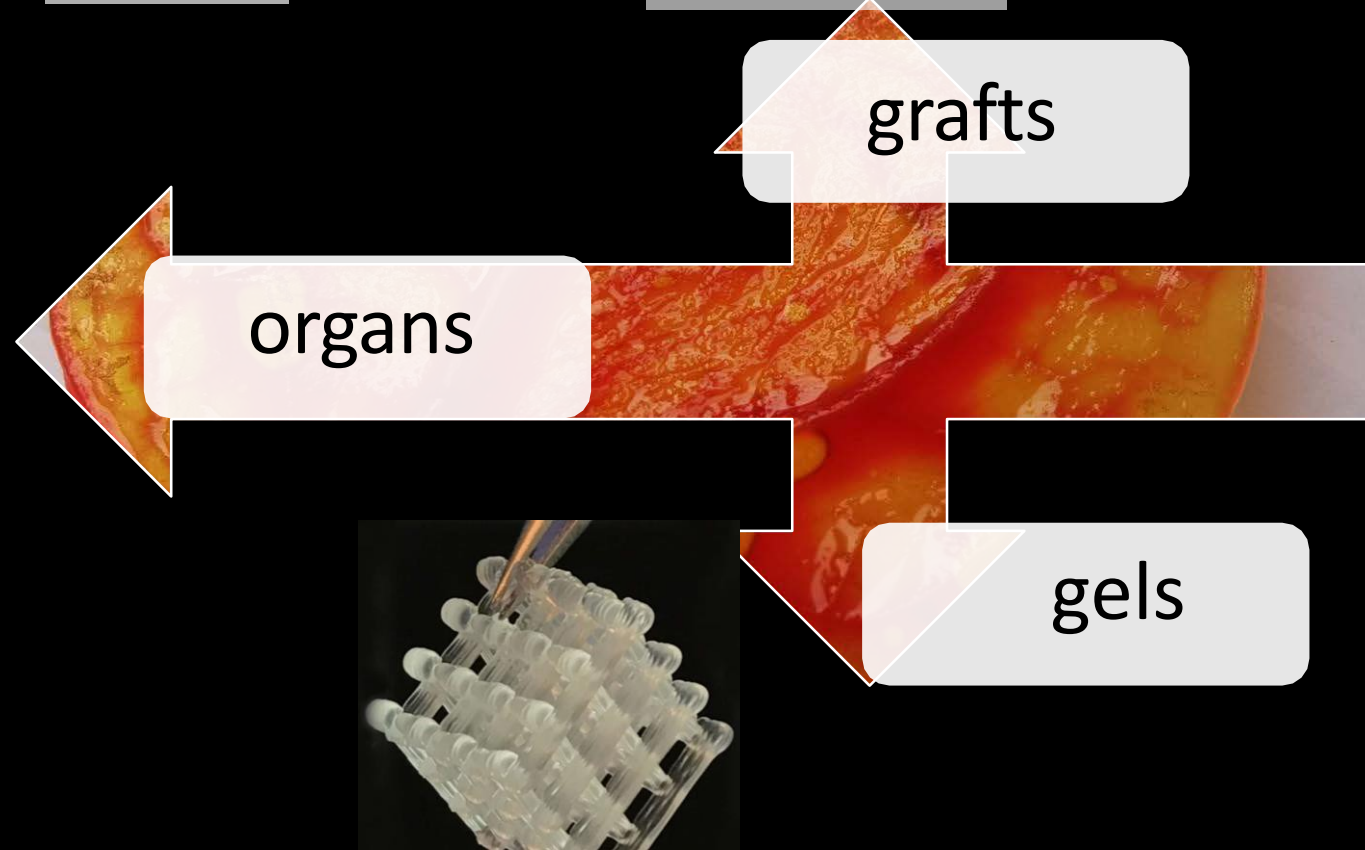
N. J. Hamilton,¹ M. Kanani,² D. J. Roebuck,³ R. J. Hewitt,⁴ B. Cetto,⁵ E. J. Culme-Seymour,⁶ E. Toll,² A. J. Bates,⁵ A. P. Comerford,⁵ C. A. McLaren,³ C. R. Butler,⁷ C. Crowley,⁸ D. McIntyre,² N. J. Sebire,⁹ S. M. Janes,⁷ C. O'Callaghan,¹⁰ C. Mason,⁶ P. De Coops,¹¹ M. W. Lowdell,¹² M. J. Elliott,² and M. A. Birchall¹



<https://time.com/4713700/spinach-leaf-heart-tissue/>



<https://gfi.org/event/using-decellularized-spinach-as-a-scaffold-for-cultivated-meat/>



<https://www.techexplorist.com/whole-new-hydrogel-system-produce-medicines-chemicals/29781/>

CHEMICAL METHODS

Surfactants

*Anionic, cationic, zwitterionic

acidic/basic treatment

HYBRID METHODS

PHYSICAL METHODS

Freeze/thaw cycles

Ultrasonication

Mechanical stress

ENZYMATIC METHODS

Trypsin

Lipase

Nucleases (DNase, RNase)

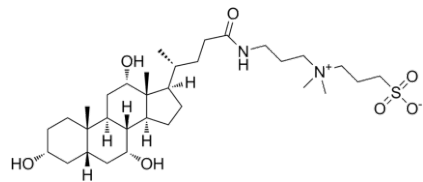
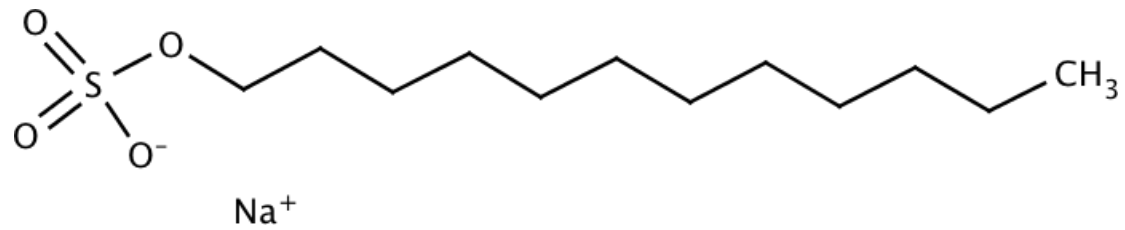
VARIABLE PARAMETERS

Working temperature

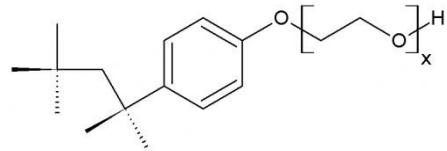
Concentration of active agent or
intensity of physical stimuli

Exposure duration

Dodecyl (lauril) sodium sulfate (DDS)

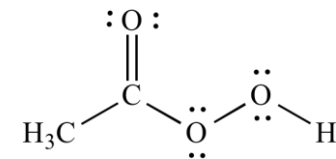
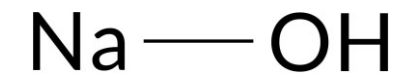


CHAPS

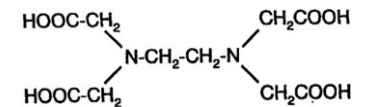


Triton-X

Sodium hydroxide



Acetic peracetic



EDTA

Experimental protocols

NaOH

DDS

Electrolytic medium, antimicrobial

Plant model

animal model

Washing (other detergents, NaOCl, H2O2)

Phosphate-buffered saline (PBS)

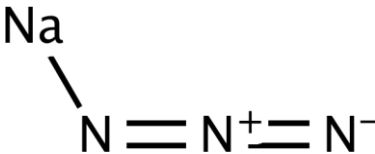
NaCl

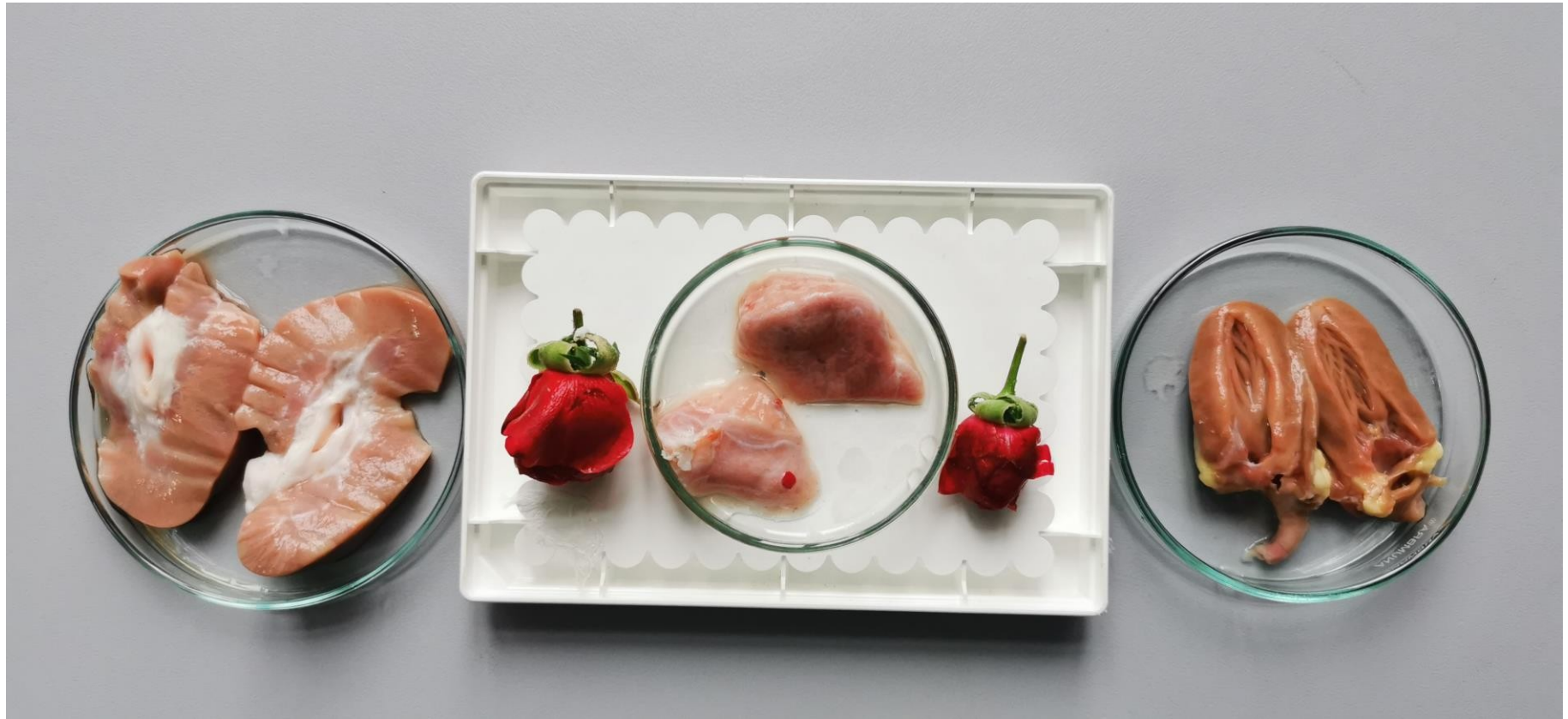
KCl

Na₂HPO₄

KH₂PO₄

Sodium azide







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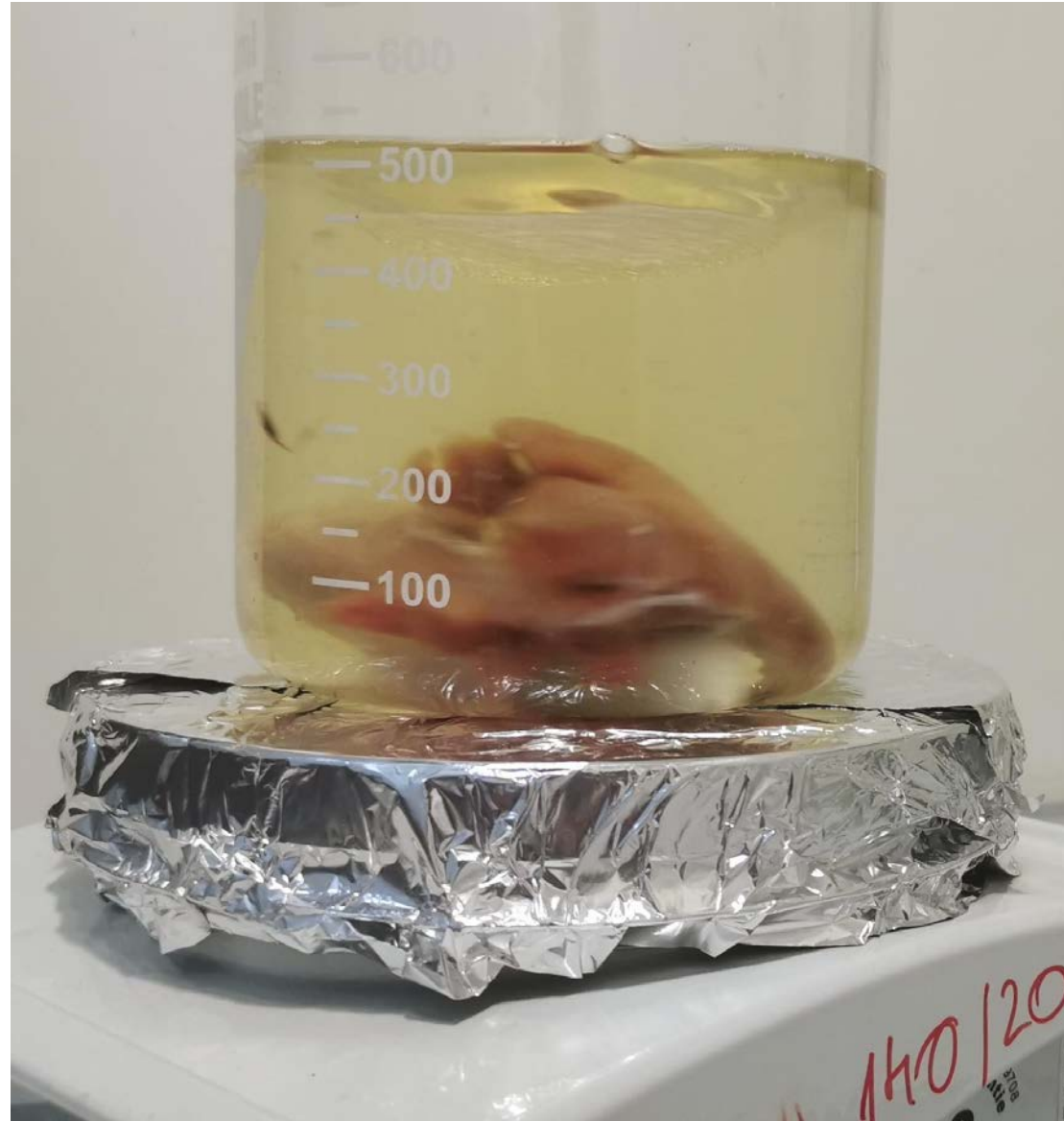
anpcdefp



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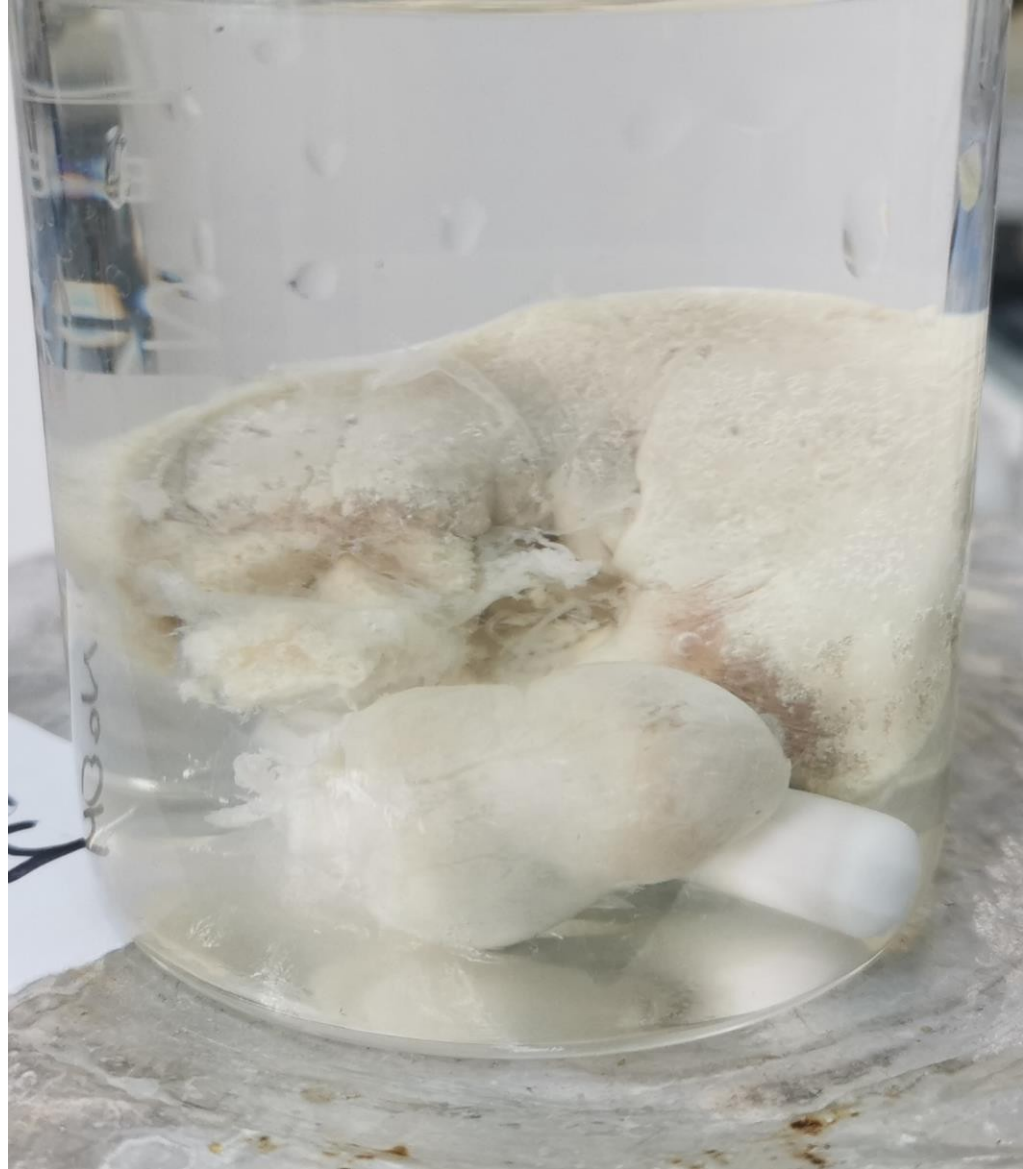
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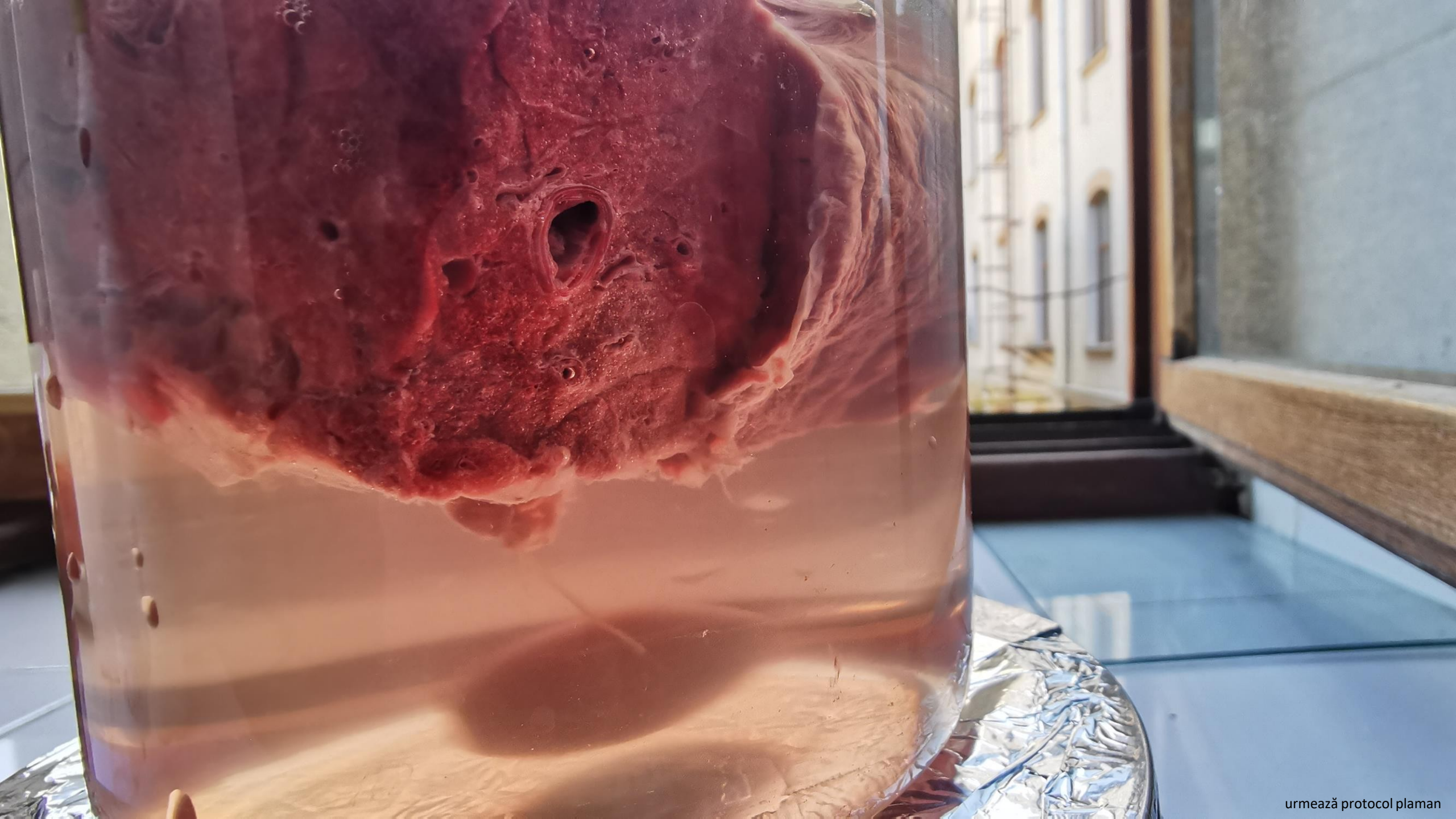










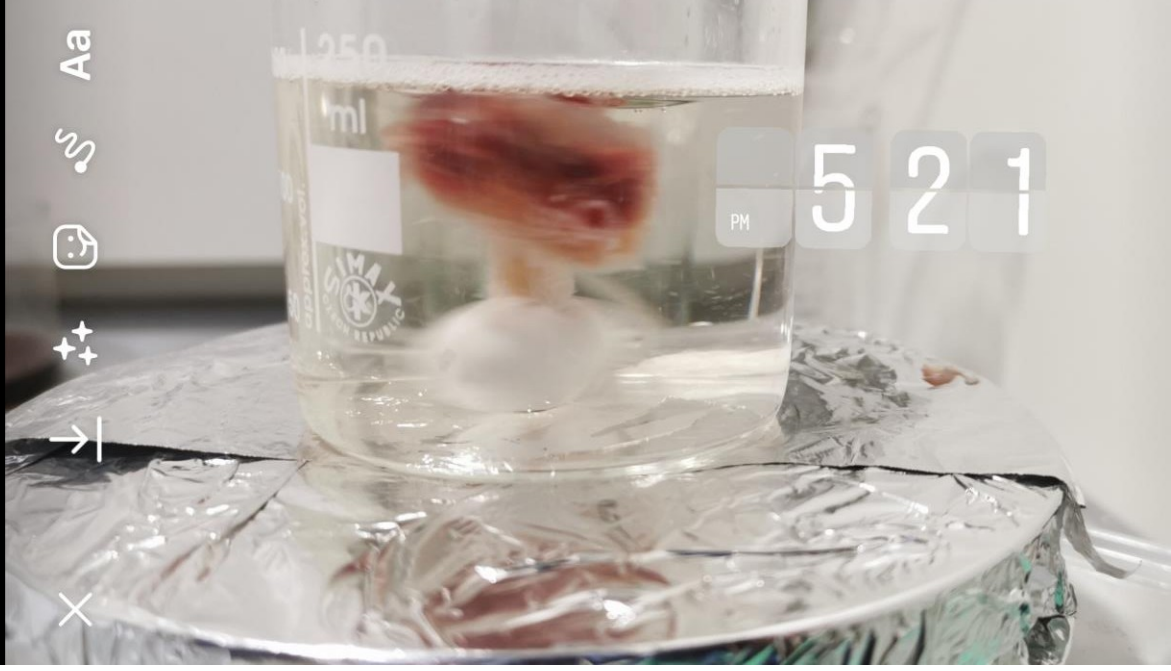
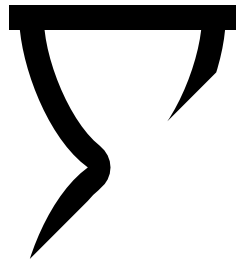




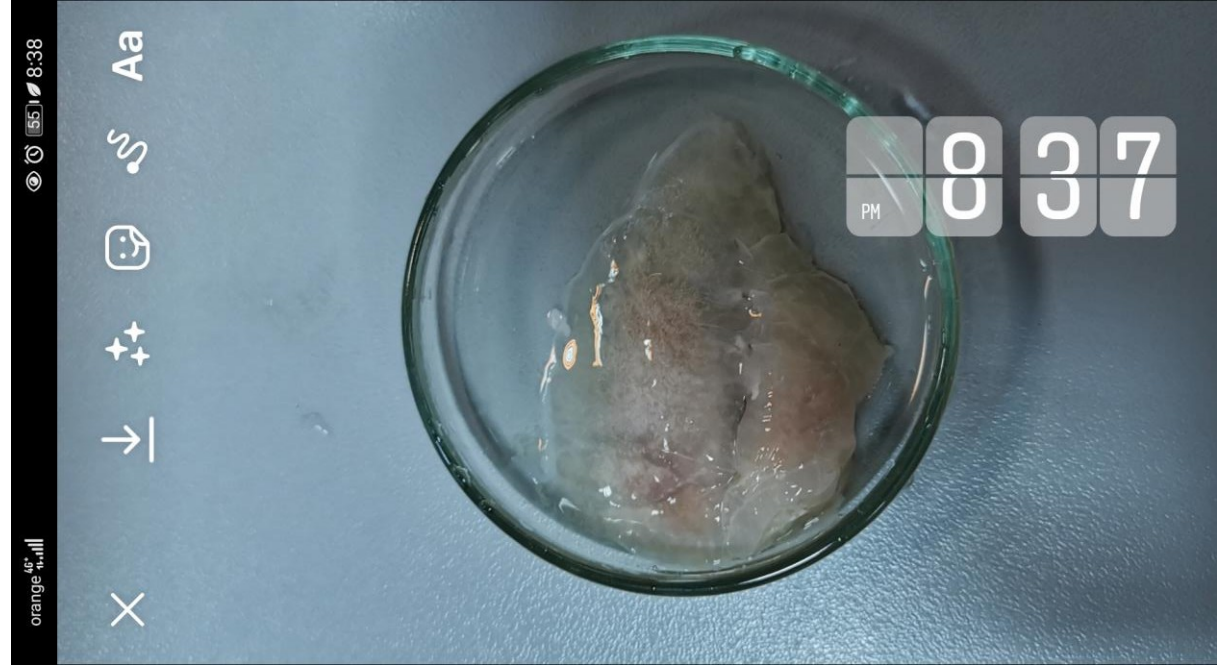
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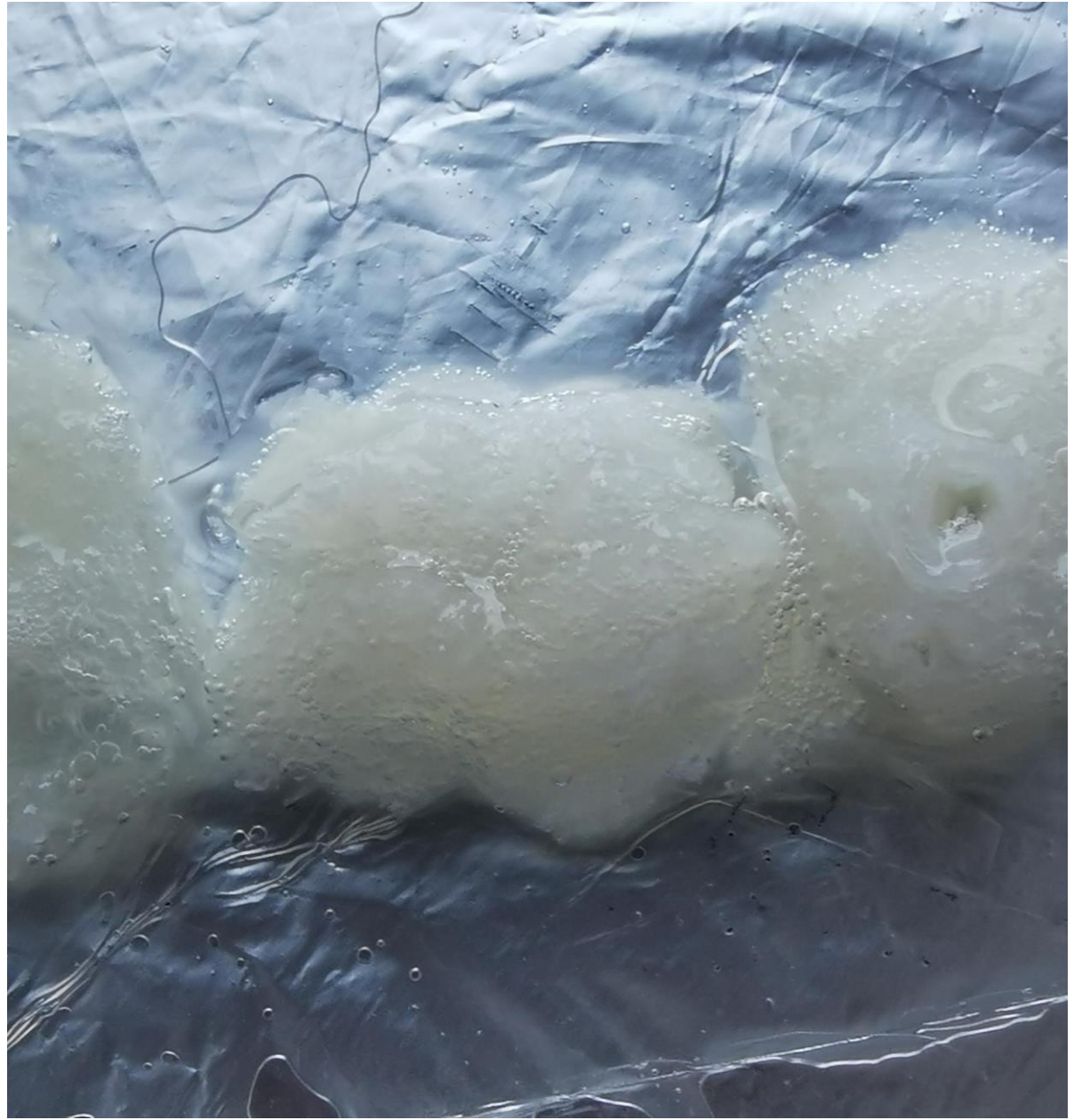
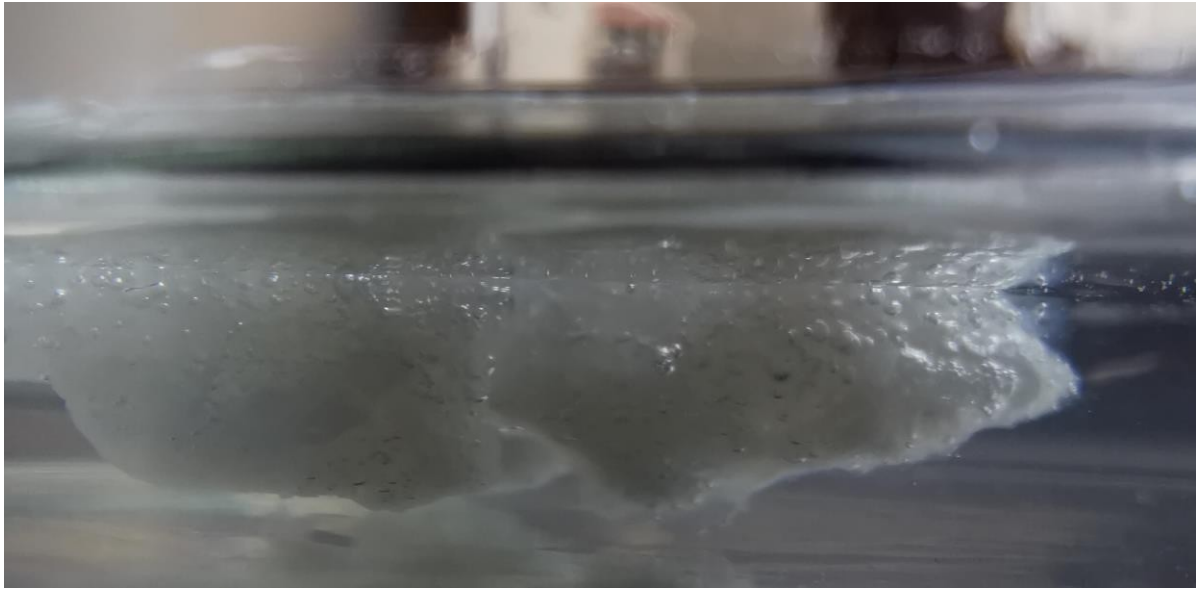


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DDS

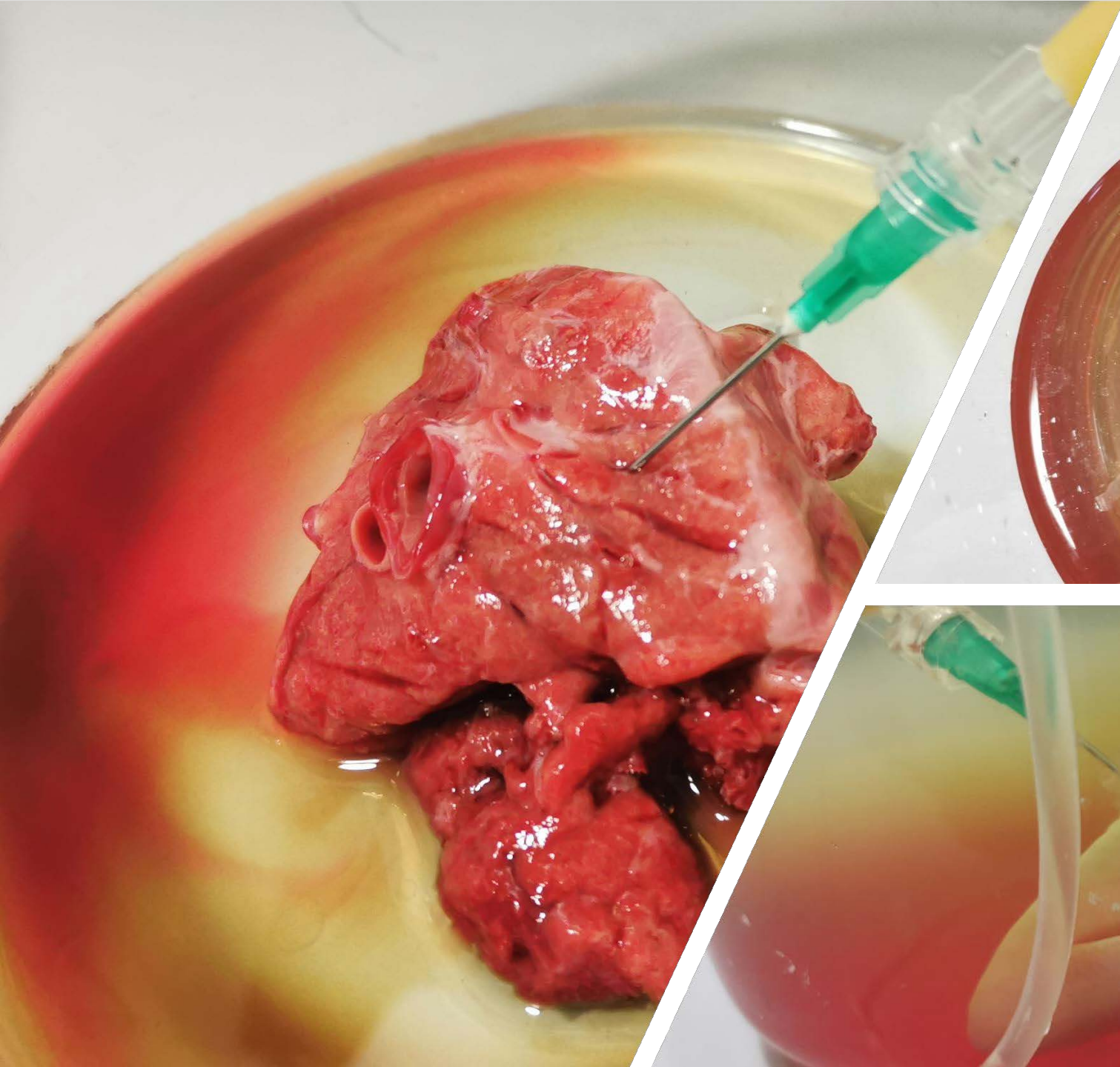


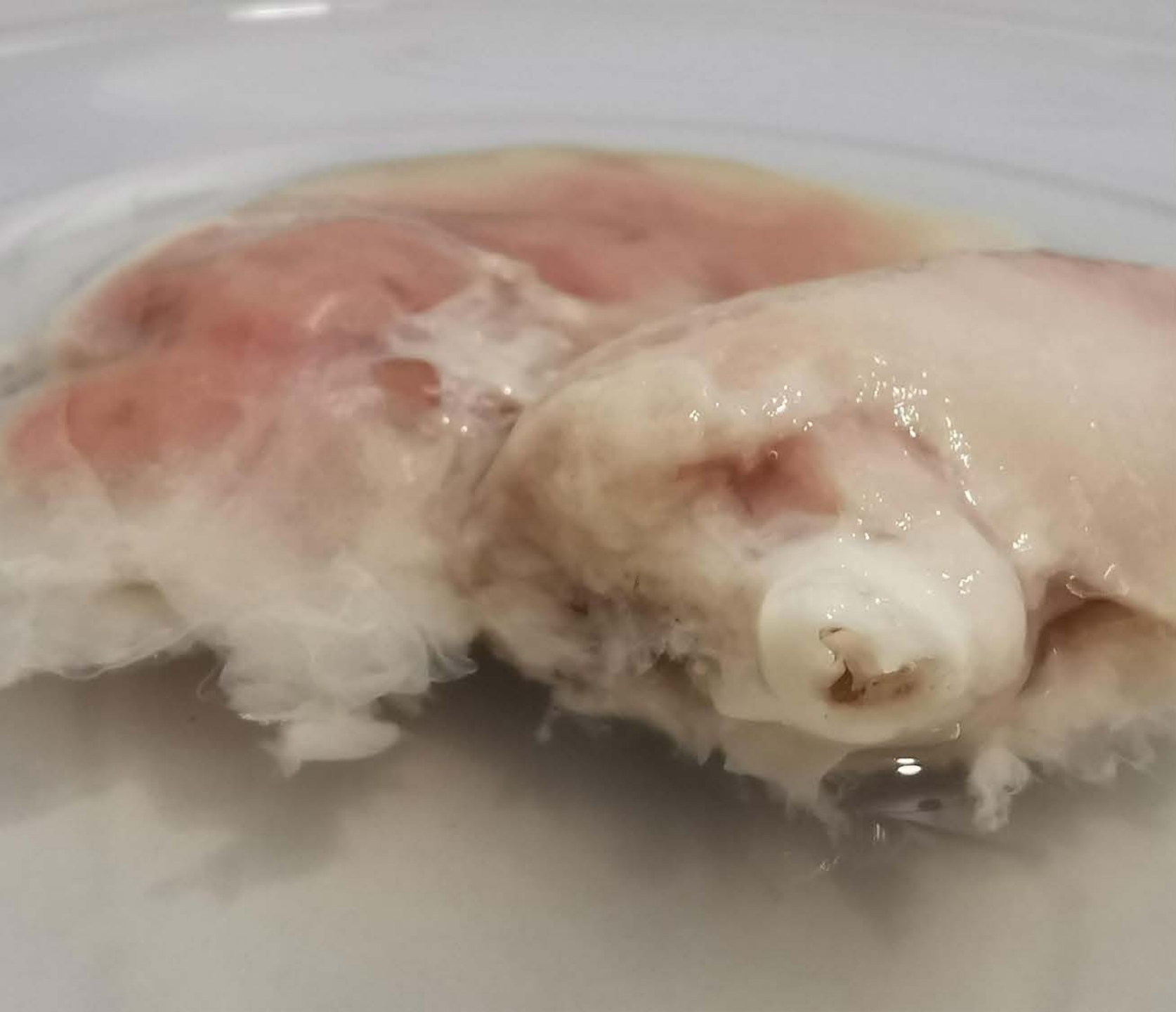


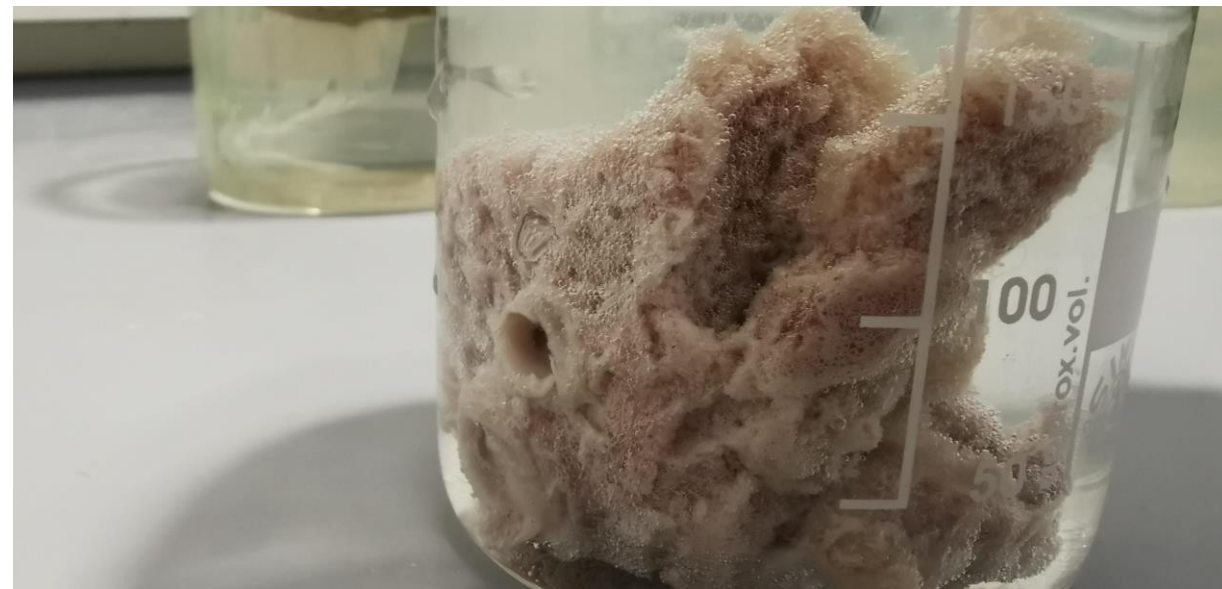
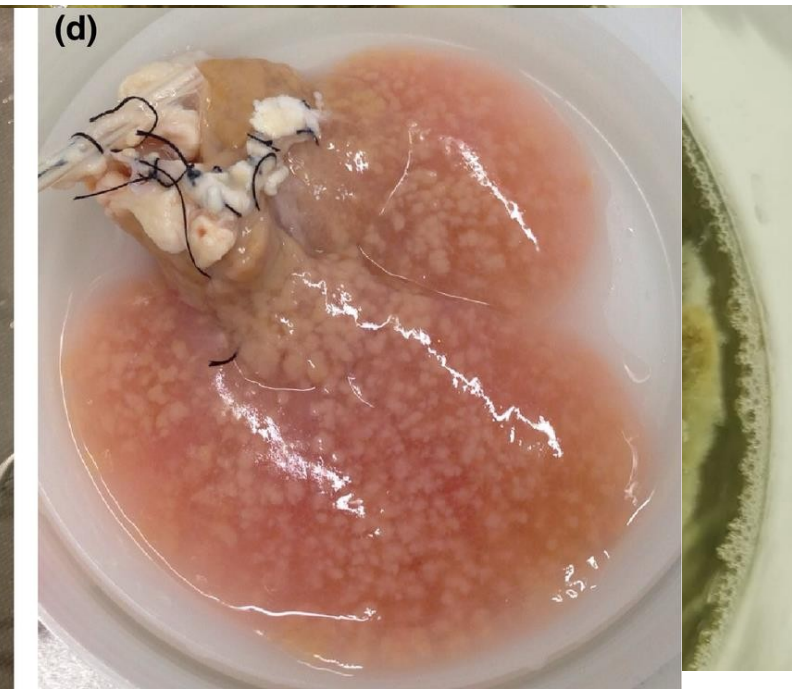
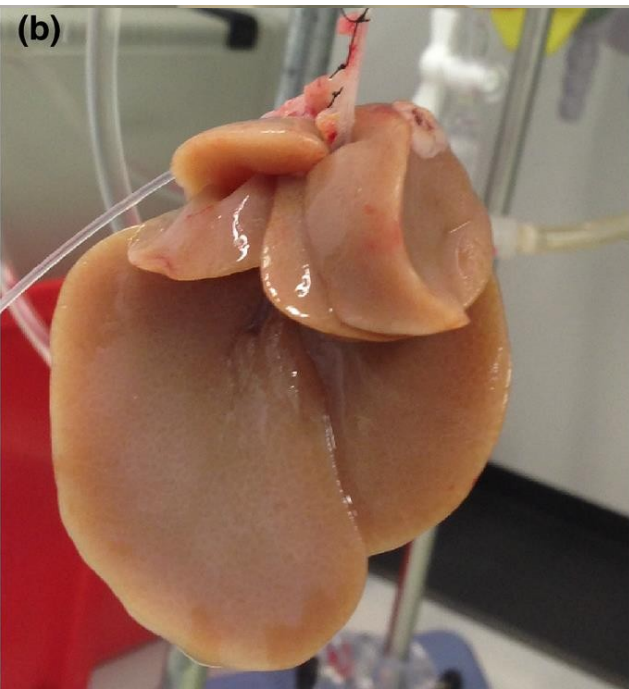
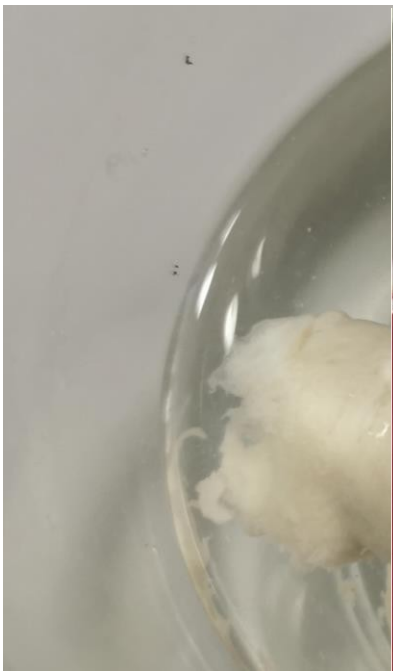




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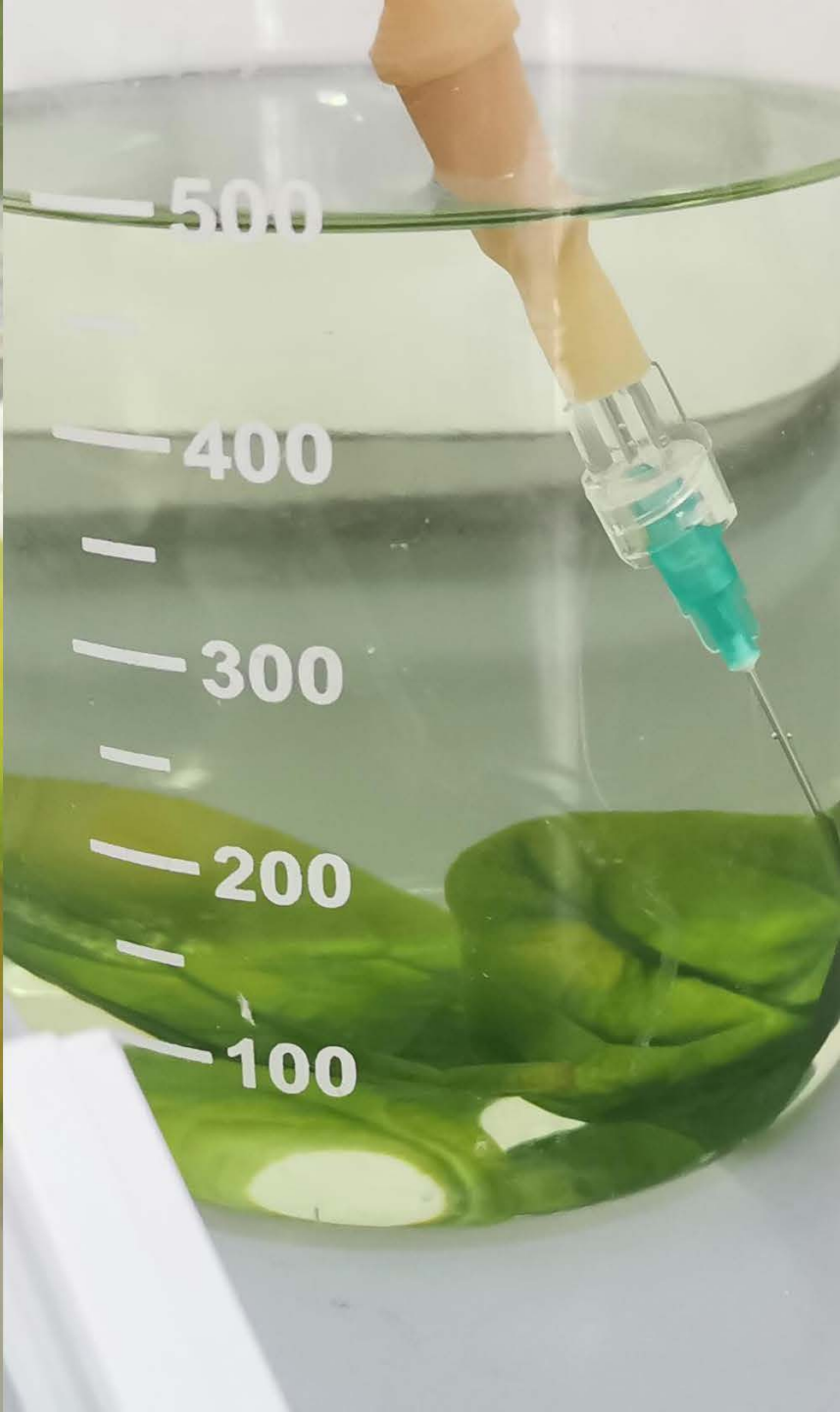
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urmează rezultat decelularizare model vegetal









The next step is the washing stage of the plant model.

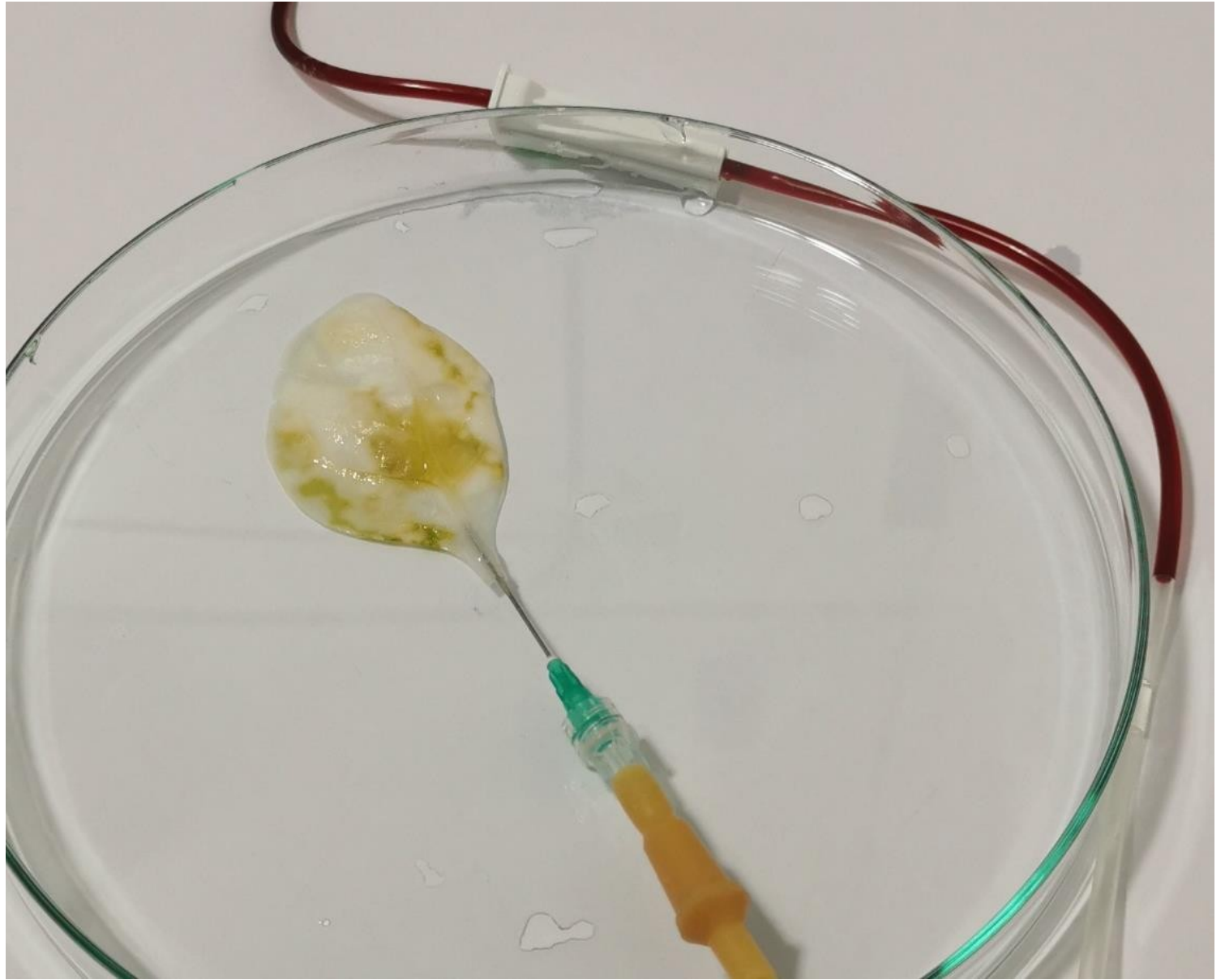


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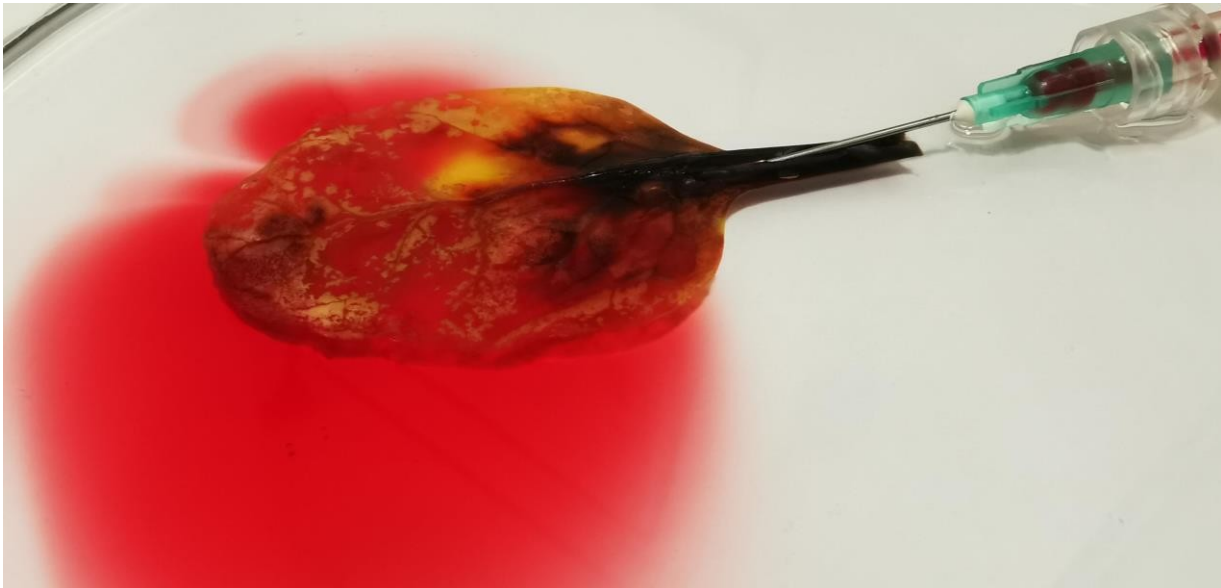
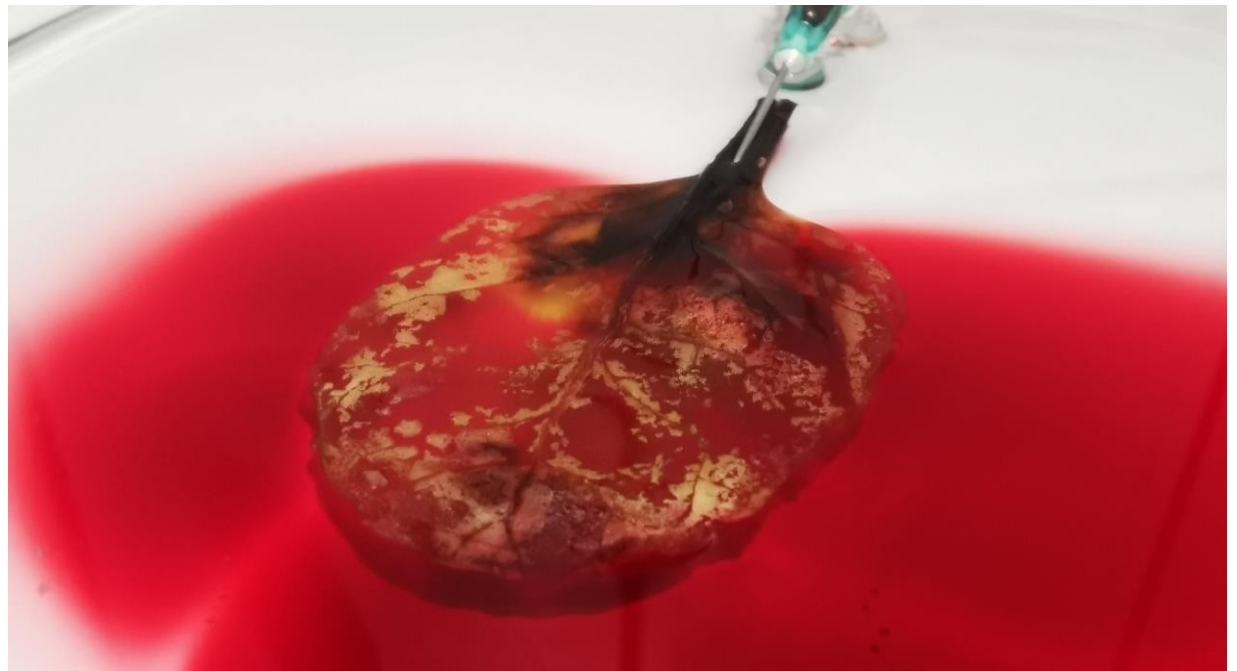
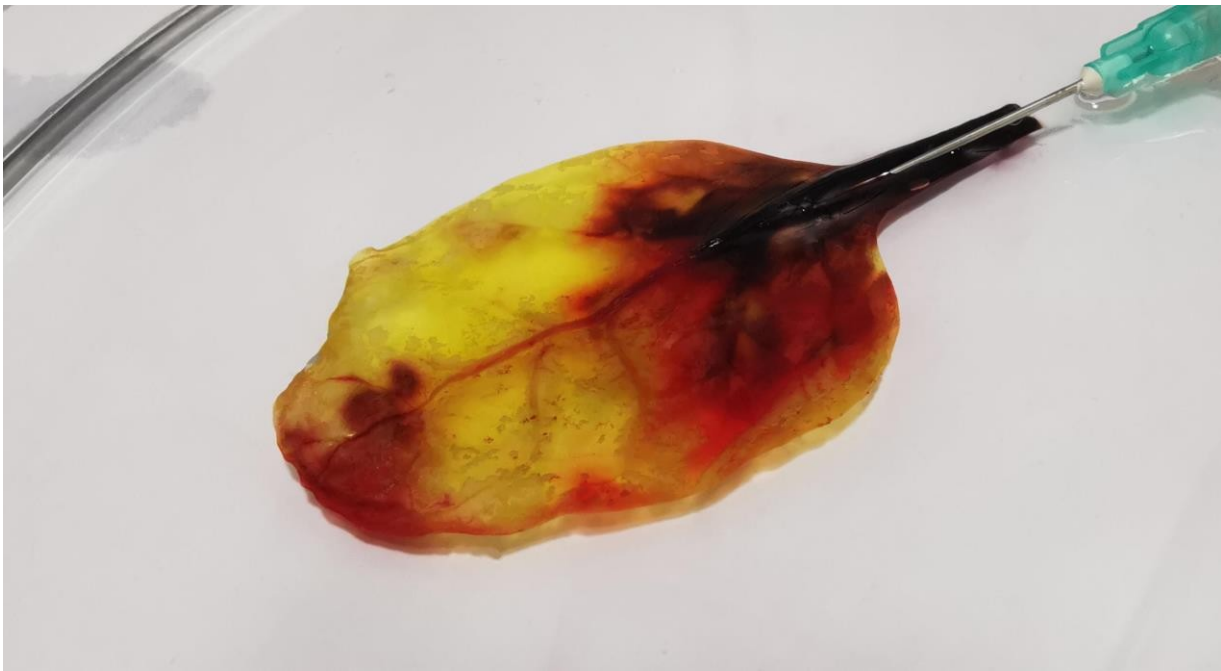


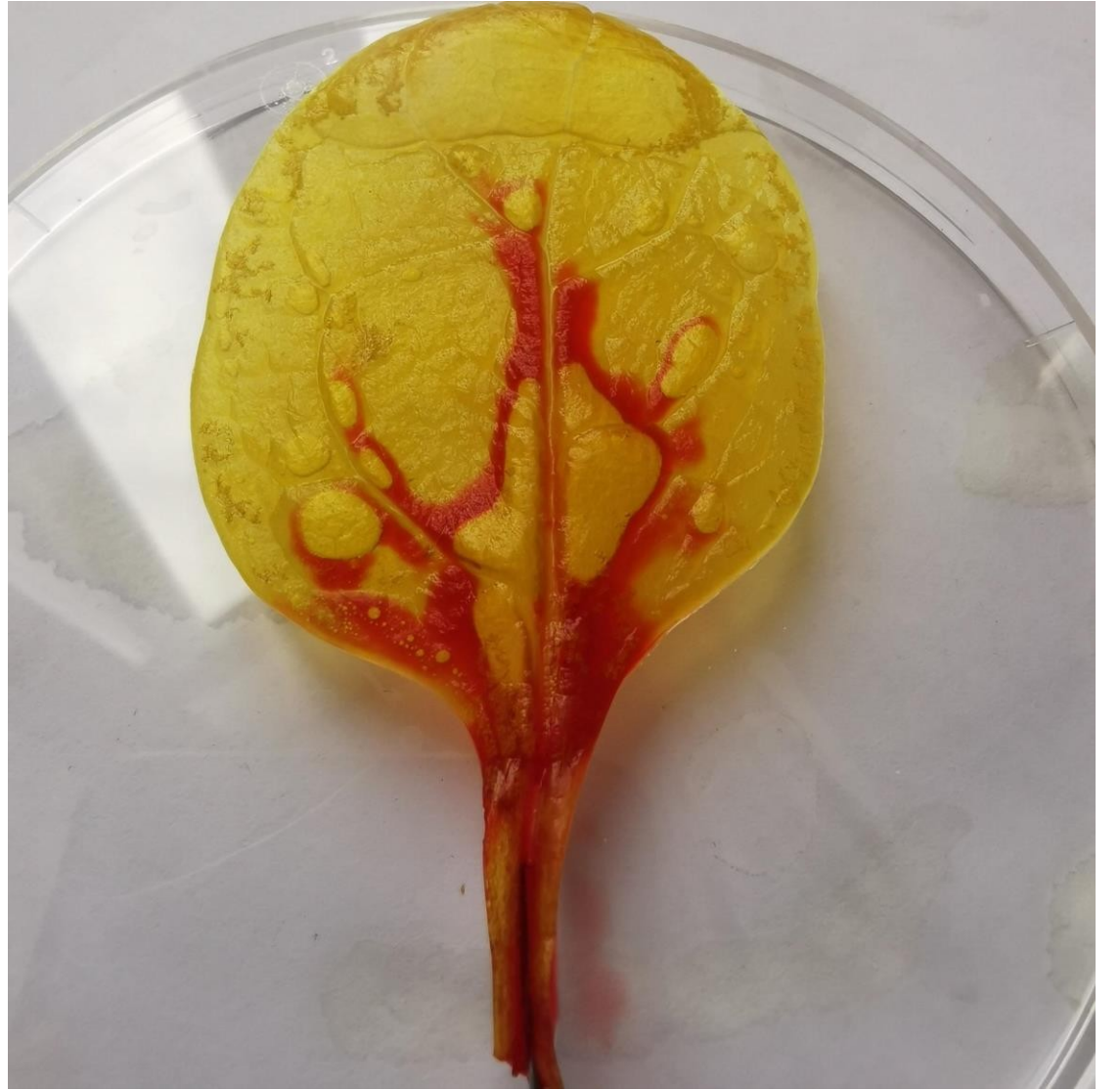
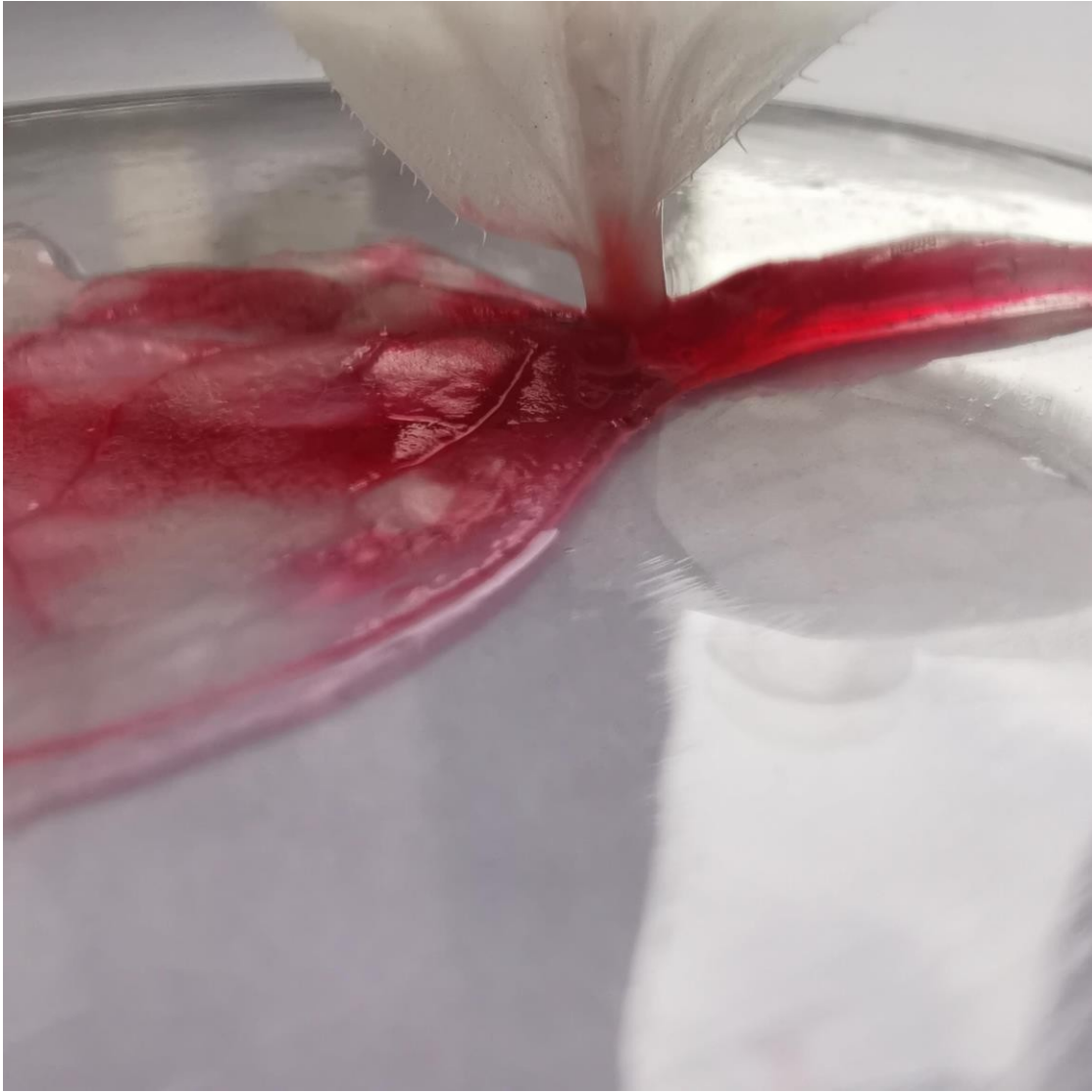
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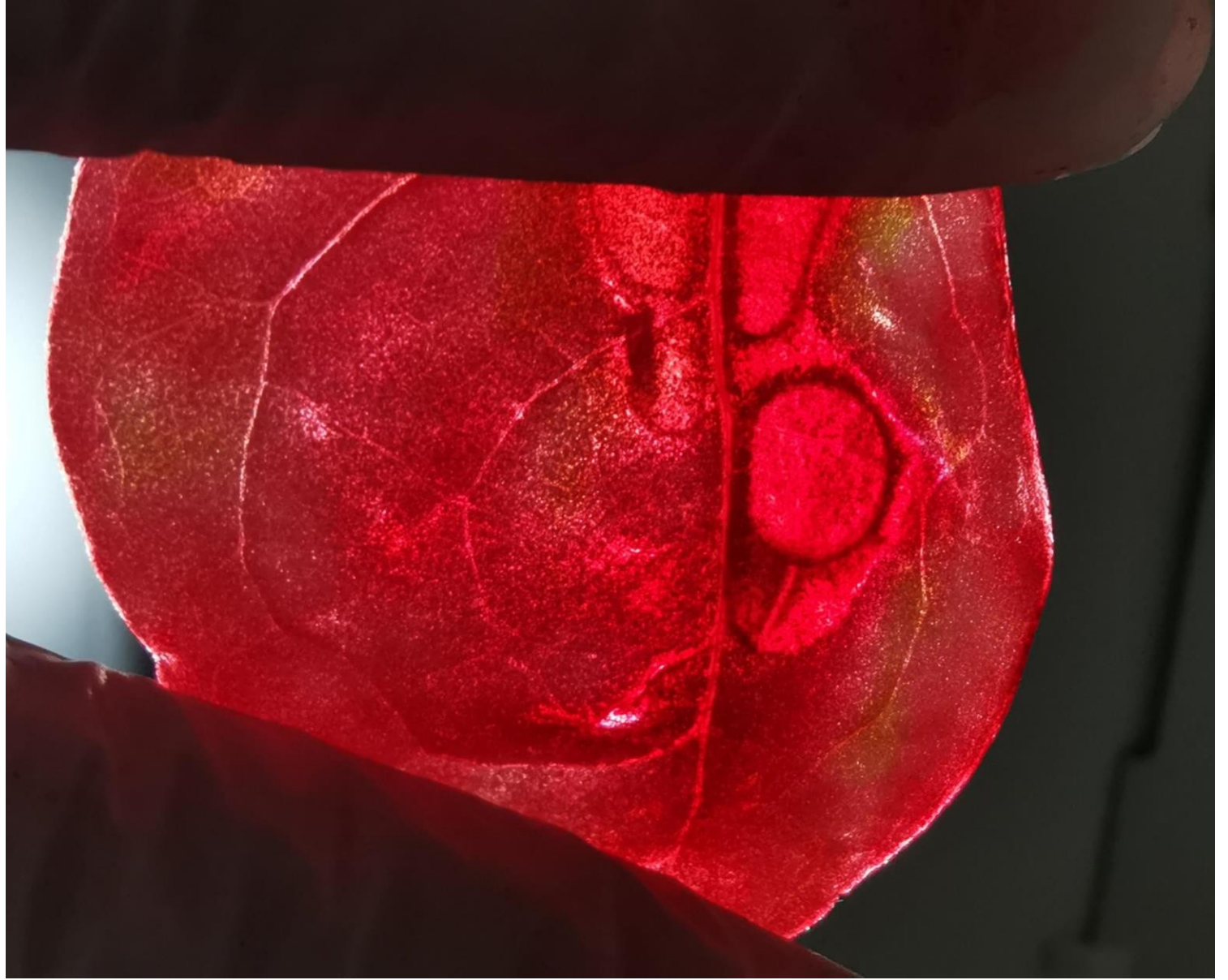


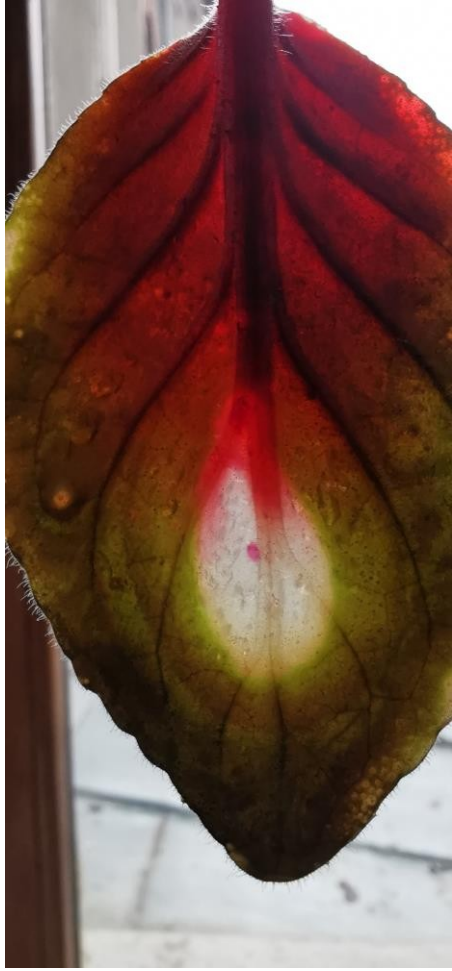
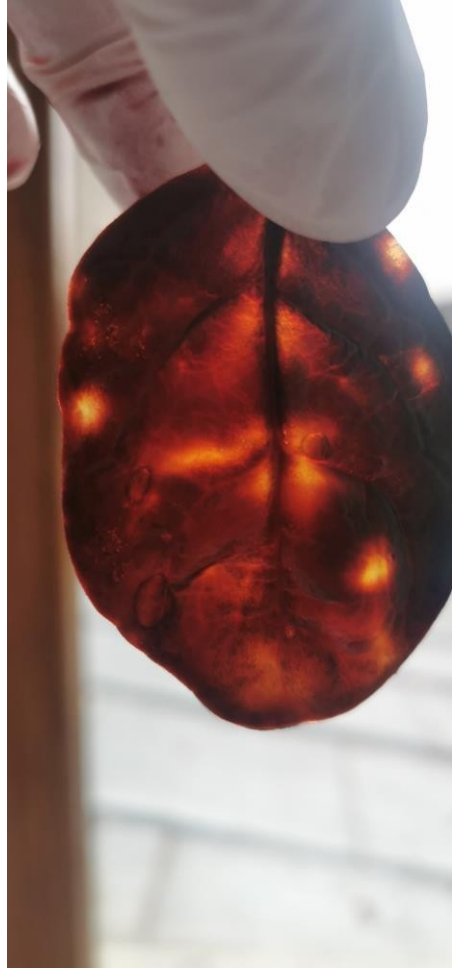
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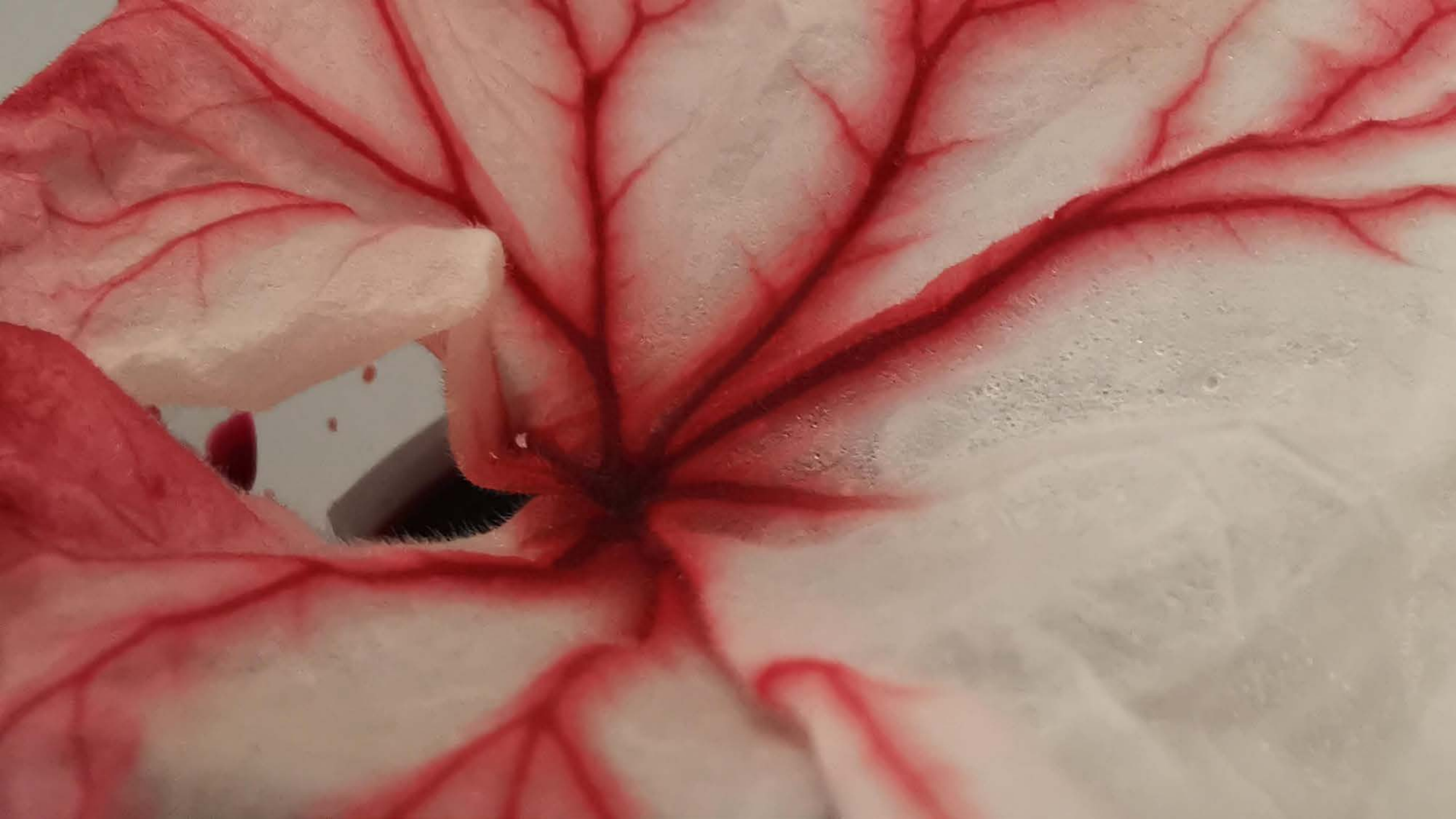


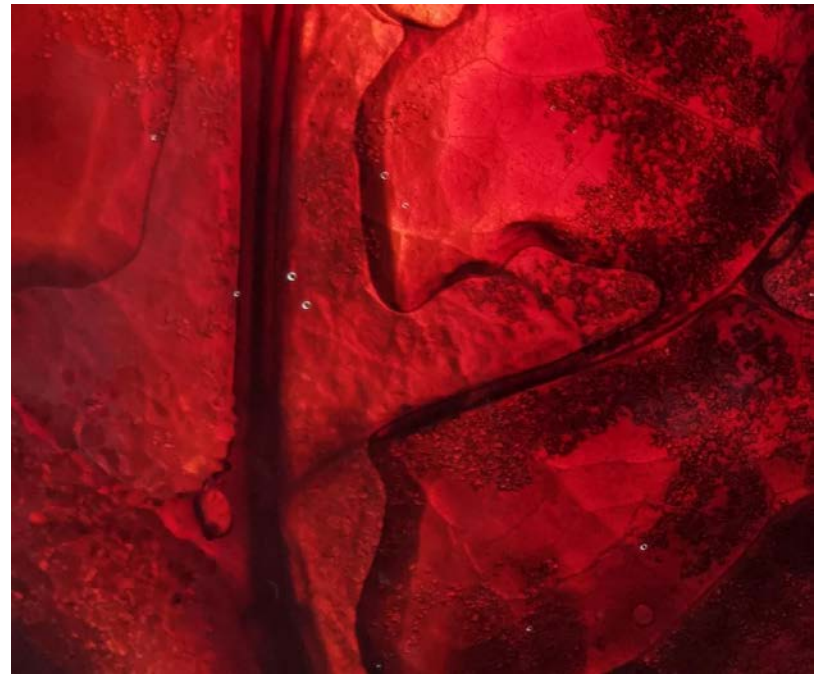
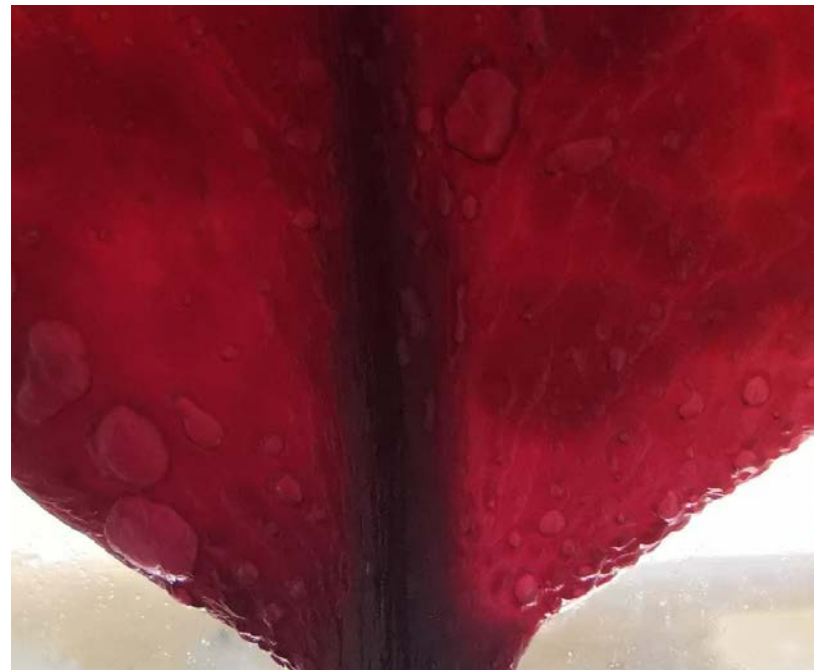
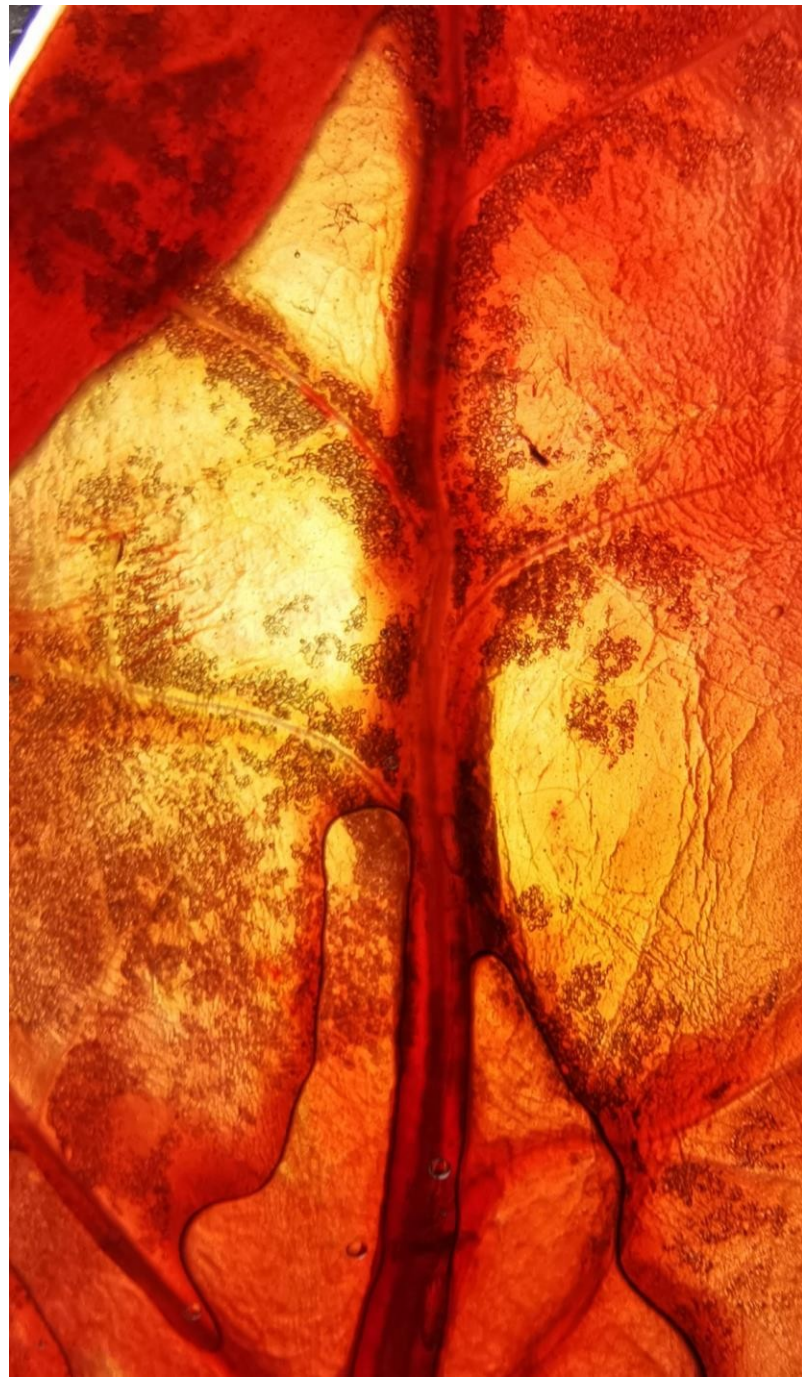
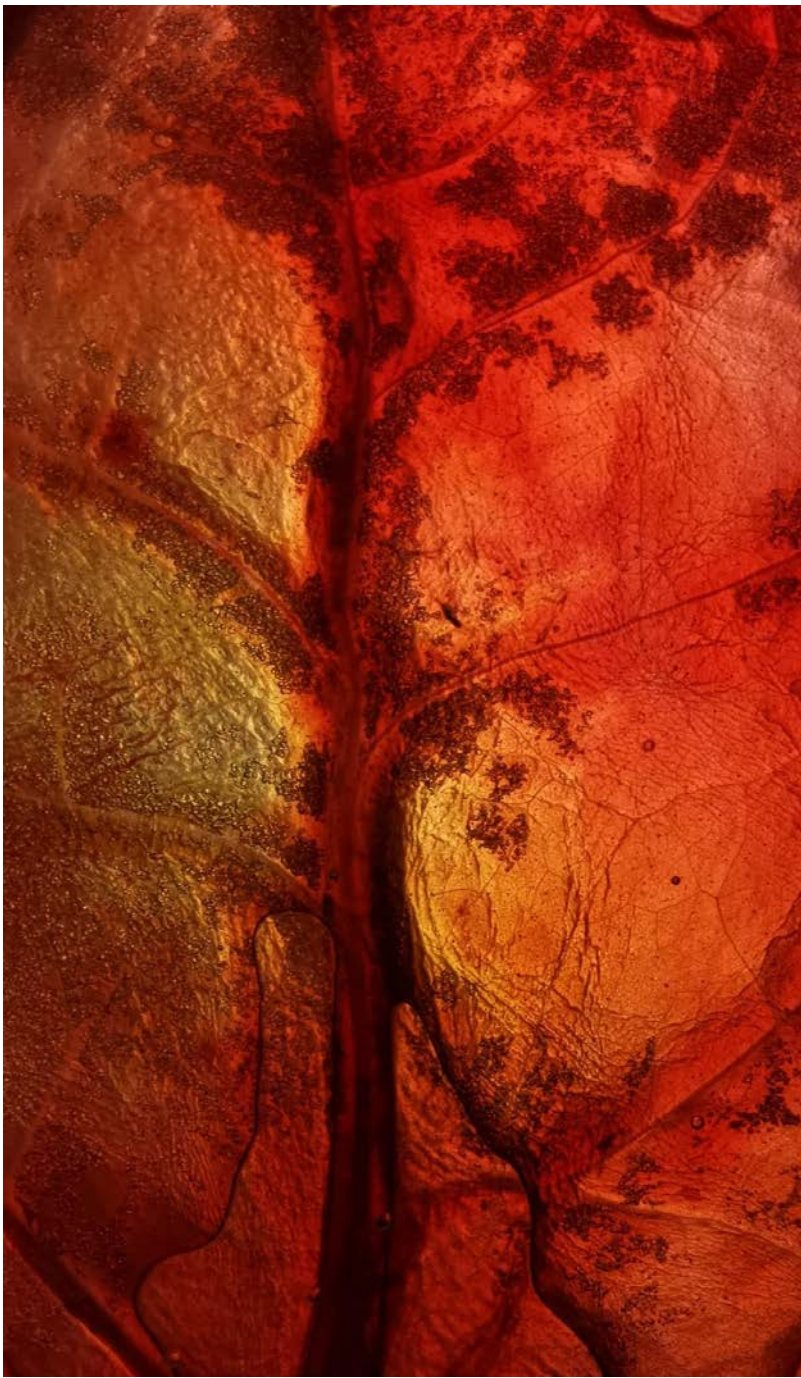




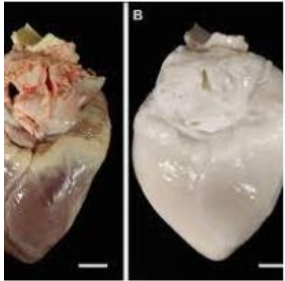












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Medical Creations - The ...
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Bringing A 'Ghost Heart' To Life
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Ghost Heart: Miracle in Medicine - Guardian Liberty ...
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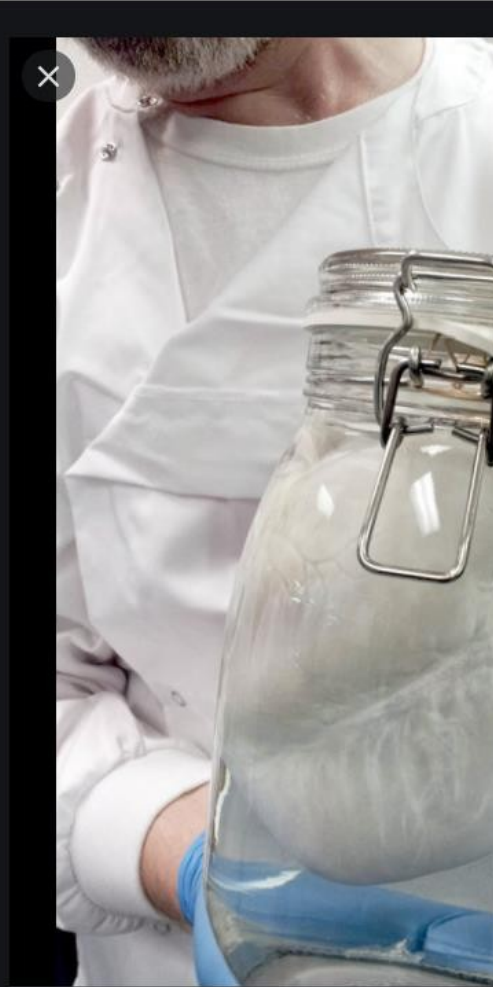
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