



WOODforHEALTH project – more wood to health care buildings

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ForestValue

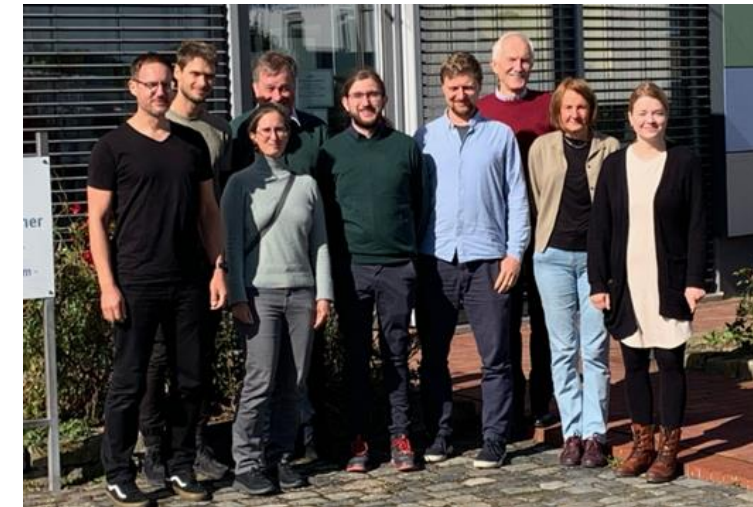
WOOD for HEALTH - Promoting use of wood products in healthcare buildings

WOOD for HEALTH promotes safe and increased use of wood products through the development of antimicrobial surfaces, hygiene concepts and by providing the first guideline for use of wood in healthcare buildings.

Project duration 36 months / partner between 1.1.2022 – 31.7.2025

1. University of Oulu, Finland
2. White Arkitekter, Sweden
3. Fraunhofer Institute for Wood Research, Germany
4. NTI, Norwegian Institute of Wood Technology
5. Latvian State Institute of Wood Chemistry
6. Auro Pflanzenchemie AG, Germany
7. Iecavnieks & Co, Latvia

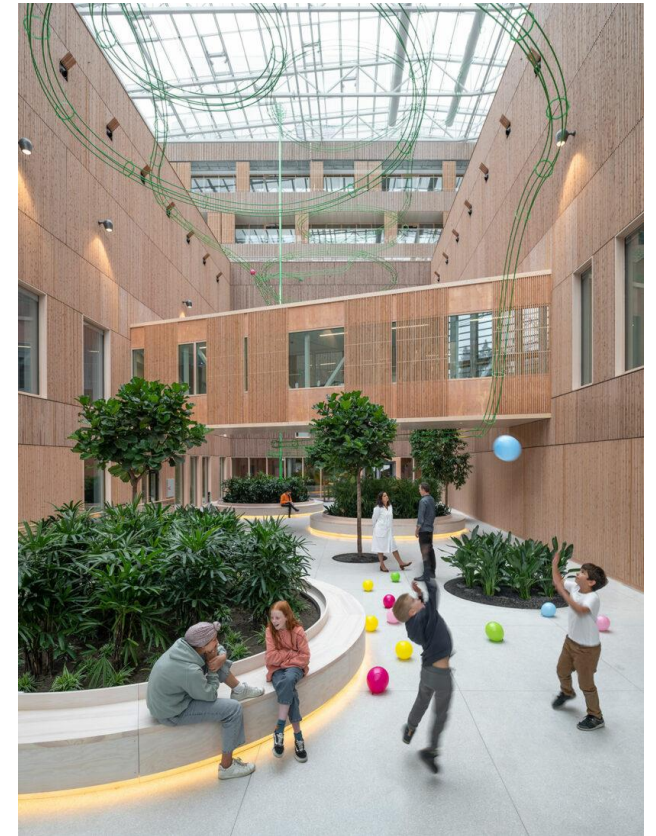
<https://www.woodforhealth.eu/about/>





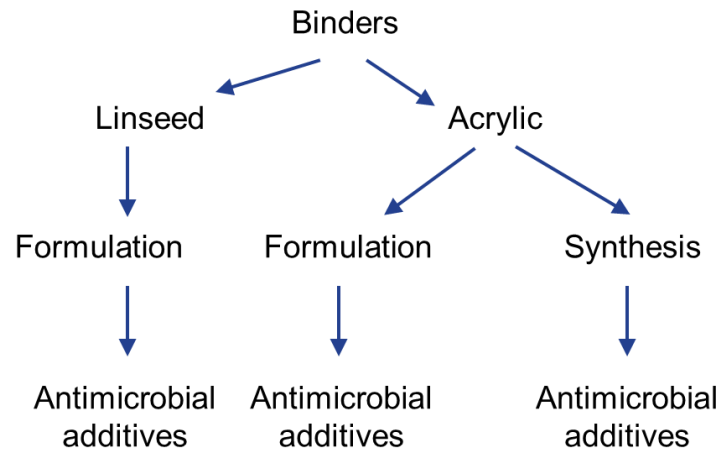
Wood surfaces in health care buildings – practical experience

- WOOD for HEALTH started the project by doing a fictional re-designing of Queen Silvia Children's Hospital in Gothenburg as a point of departure for the experimental development.
- Good practices of using wood in health care buildings were collected in all partner countries.
- Overview of legal requirements to surfaces in health care buildings

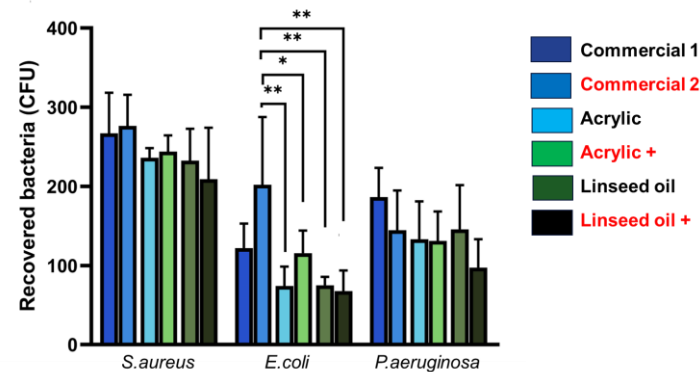
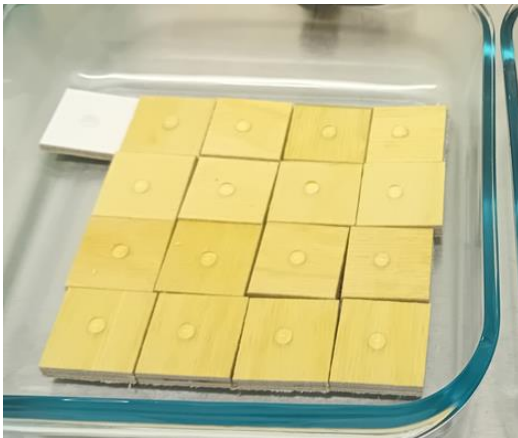




Coating development and analysis



- Non-film-forming and film-forming coating systems
 - Plant oil-based
 - Acrylic paints → new binders by synthesis of non-leaching functional groups to the polymer
- > 15 different antimicrobial compounds were tested, at first alone and then the best ones in coating formulations. Testing against three different bacteria, formulations also against two viruses
- Coatings tested for mechanical and chemical resistance, photo-stability, flammability and water vapor damp diffusability

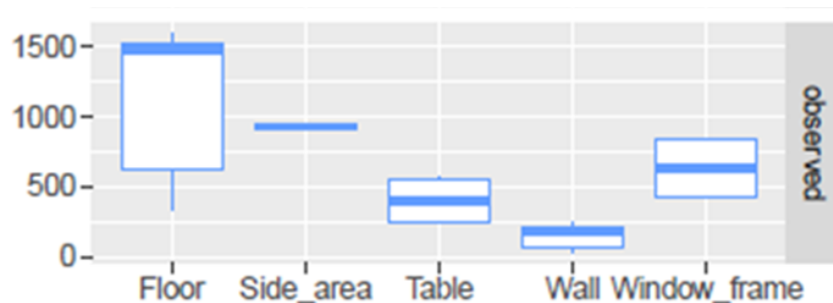


Test liquid	Acetic acid 10%		Citric acid 10%		Ammonium Solution 10%		Ethanol 96%		Ethyl butyl		Acetone		Des-infectant		Virkon		Lifeclean		Pera save
	16h	1h	16h	1h	16h	2m	16h	1h	16h	10s	16h	10s	16h	1m	30m	10m	5m	2m	10m
Commercial1	5	5	5	5	1	5	5	5	5	5	5	5	1	5	5	5	5	5	5
Commercial2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Linseed	5	5	5	5	1	1	1	2	1	5	1	4	1	5	5	5	5	5	5
Linseed+	4	5	4	5	1	1	1	3	3	5	3	5	4	5	5	5	5	5	5
Acrylic	3	5	5	5	5	5	1	3	1	3	1	3	4	5	5	5	5	5	5
Acrylic+	4	5	5	5	2	5	1	3	1	4	1	5	2	3	5	5	5	5	5
Reference	5	5	5	5	1	4	5	5	5	5	5	5	1	1	5	5	5	5	5



Microbiomes on hospital surfaces

- By studying the microbial communities in hospital surfaces, we can assess the effects of building design, building materials or coatings, and use & maintenance on hospital microbiomes
- Methods: wood and other common materials tested for viable bacteria and microbiome
- Close to 6000 taxonomic groups identified
- Statistically significant differences between wood and non-wood materials.



The number of species observed in a type of surface



Other activities carried out

- Modelling of moisture buffering capacity for the indoor environment,
- LCA analysis of interior wood
- Master thesis comparing legislation for health care buildings in Sweden and Norway; in particular what legislations effects on use of wood in those buildings
- These three all by Norwegian Institute of Wood Technology, the Master thesis in collaboration with White Arkitekter





A guide to using more wood in healthcare buildings

- Publishing Europe's first guideline for the use of wood products in healthcare buildings and other facilities with high demands to surface hygiene.
- Compilation of good practices & examples, and summary of issues that have to be taken into account
- <https://www.woodforhealth.eu/guid/>

TABLE OF CONTENTS

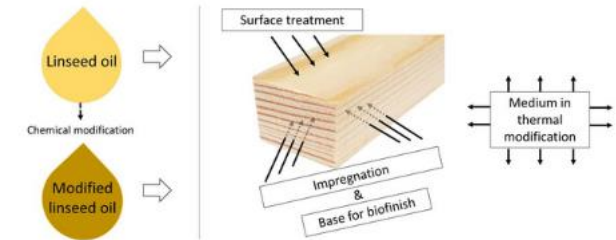
Preface	1
The research project's work packages	2
Introduction	4
Background	4
Objectives	5
Good practice	6
Reflecting on good practice	28
Requirements revisited	30
Hygiene requirements	31
Chemical resistance	33
Mechanical resistance	34
Color stability	35
Fire safety	36
Indoor climate	37
Industrial development	38
The project's coating research	41
On rules and regulations	44
Wood for Health project participants	45





Dissemination

- The guideline
- Wood in healthcare buildings – Wood for Health project results seminar, Kuhmo, Finland
- A wide range of dissemination activities:
 - Wood for Health International Newsletter, annually
 - Scientific articles, 1 published, 2-3 in preparations
 - Conference presentations and posters (17)
 - General media, 41 news articles
 - Social media (e.g. <https://www.linkedin.com/company/wood-for-health-project/>), 35 LinkedIn postings, 31 Facebook postings
 - “Purely from wood”, Finnish regional project





Thank you!

Supported and funded by:



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment



With support from



Federal Ministry
of Food
and Agriculture

by decision of the
German Bundestag



Latvian Council of
Science



Funded by
The Research
Council of Norway

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773324.

