UK Health Security Agency

Provisional data on tattooing survey & hazards and risks of green soap

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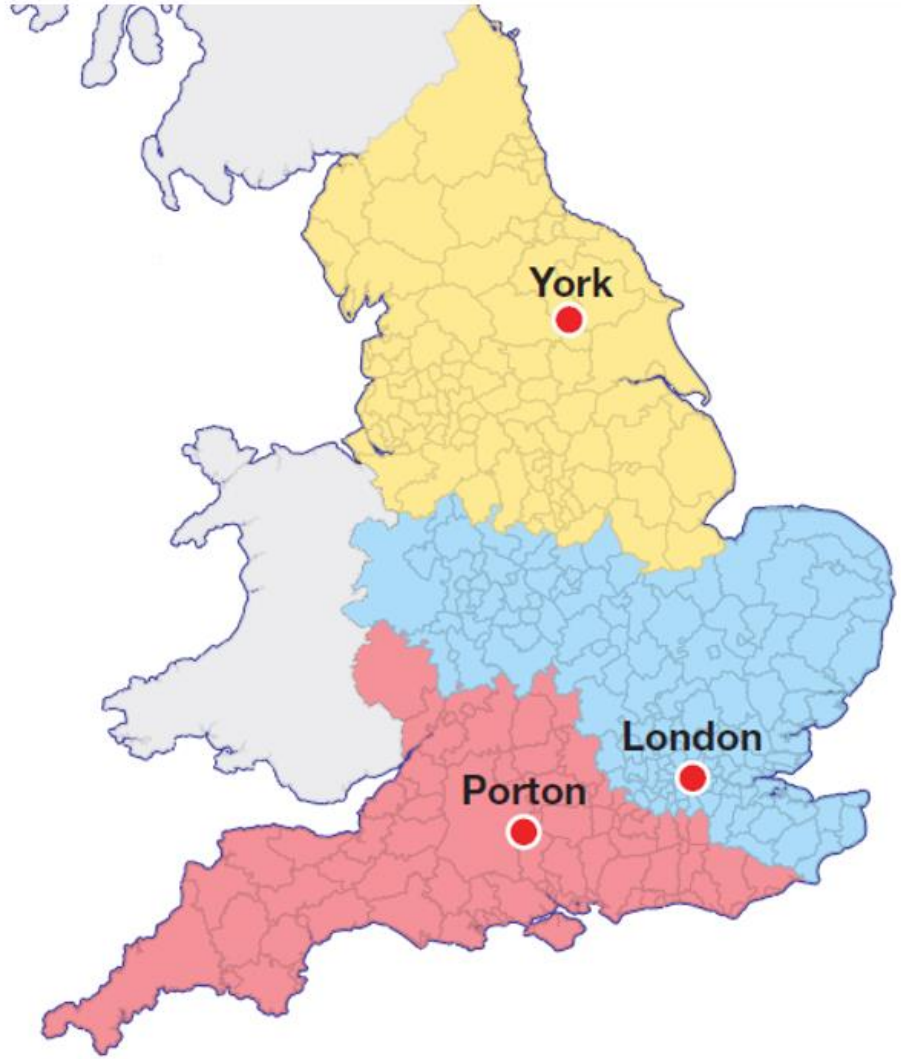
Overview

- FWEMS, surveys and aims
- Tattooing process and prevalence
- Toolkit, legislation and consultation
- Previous survey of tattoo premises
- Study 81 data
- More about Green soap

UKHSA and the Food, Water and Environmental Microbiology Laboratory

- **The UK Health Security Agency (UKHSA)** is responsible for protecting every member of every community from the impact of infectious diseases, chemical, **biological**, radiological and nuclear incidents and other health threats
- **FW&E Microbiology Services (FWEMS)** work with Local Authorities to protect the public from microbiological threats posed by contaminated food, water and the environment.
- We operate as one laboratory on three sites (UKAS 1645)

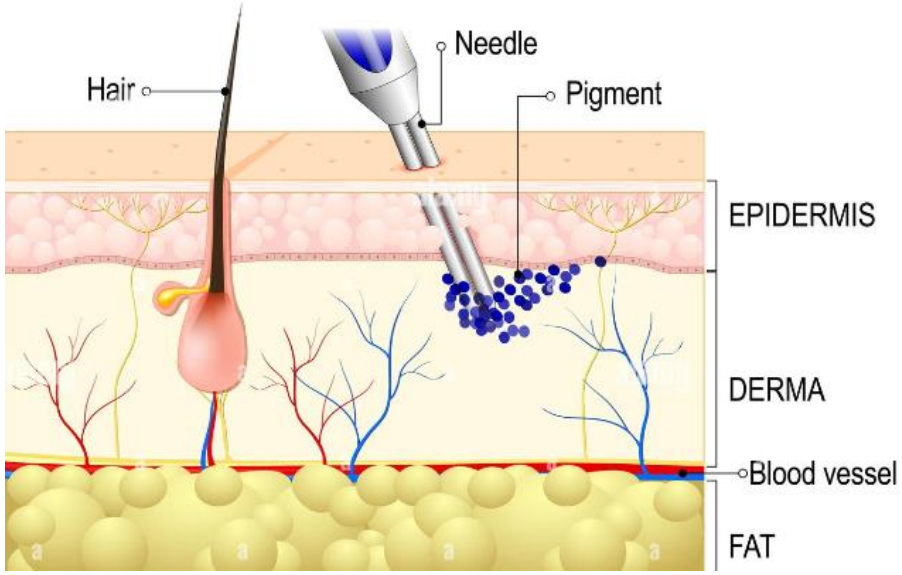


UKHSA FWEMS Survey programme

- The survey programme allows UKHSA to develop an evidence base to support public health research and development.
- It allows us to identify sources of infection.
- Regional survey can lead to national surveys
- We aim to publish data from national surveys and to use the information to inform national guidance with a view to protecting public health.
- Annually we run a national consultation to seek view from our Local Authority partners on their preferred survey topics where the 2 highest ranked options are selected from a list of proposed surveys.
- In addition to this consultation process we also have the option to deliver a reactive response survey.
- The topic for this survey comes usually from public health incidents or emerging incident trends.

The Tattooing Process

- The artist will draw or stencil a design onto the skin
- The area is cleaned with alcohol or an antiseptic
- A thin layer of ointment such as petroleum jelly is applied
- A tattoo machine with sterile needles attached is dipped in ink that has been decanted from stock bottles and the ink forced into the dermal layer of the skin by injection
- At various stages the skin may be sprayed or wiped with a tissue soaked in diluted green soap to remove blood and excess ink



Prevalence of Tattoos

- Survey in 2015 of 1700 UK adults
- 30% if those in the 25-39 years age group have at least one tattoo
- 21% of those in the 40-59 years age group
- 13% of those in the 18-24 years age group
- 9% of the 60+ group

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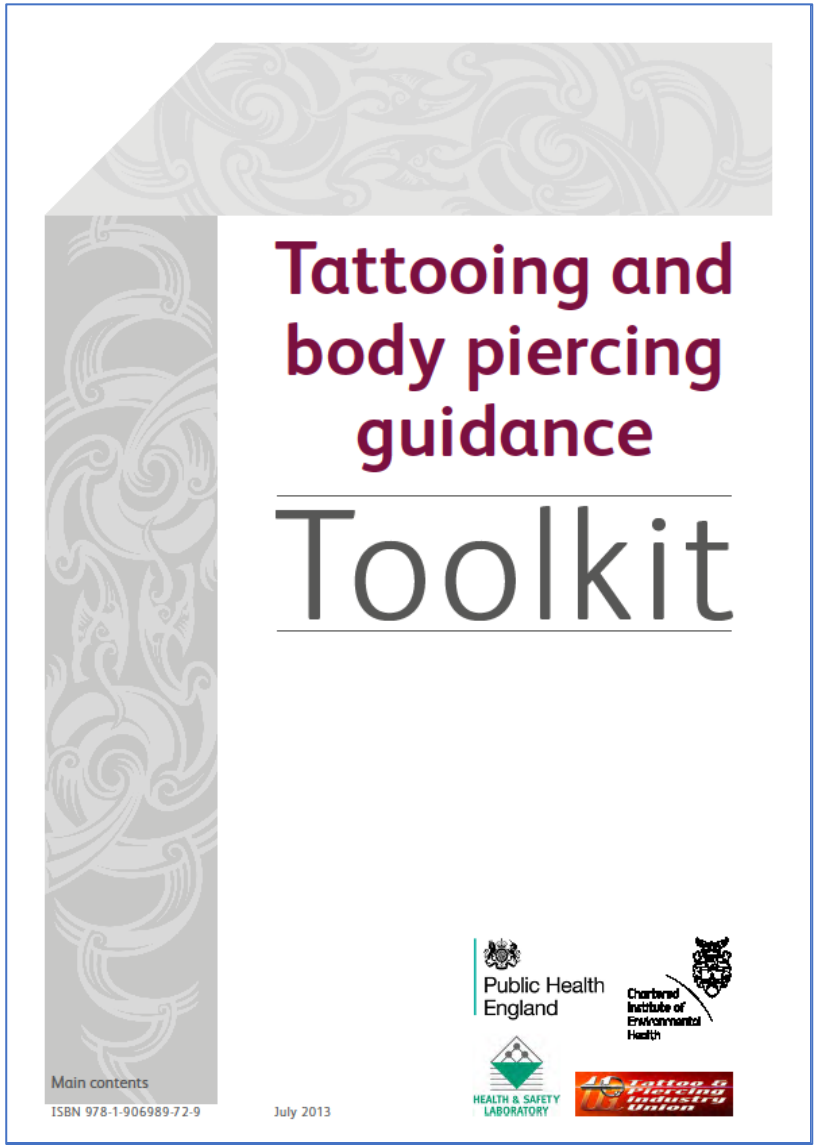
Standards

- Licencing & registration provisions
  - Specific – Model Bylaws
  - General – H&S, Risk assessment & COSHH
  - Pubic Health Legislation (Part 2A Orders)
- Tattooing and Piercing Industry Union
- Certified training?
- Guidance Toolkit (July 2013)
  - Standards for good practice
  - Consent
  - Aftercare
  - Infection control



Licensing Consultation

- In April 2022, the Health and Care Act gave the Secretary of State for Health and Social Care the power to introduce a licensing regime for non-surgical cosmetic procedures in England. The purpose of the scheme is to ensure that consumers who choose to undergo a non-surgical cosmetic procedure can be confident that the treatment they receive is safe and of a high standard.

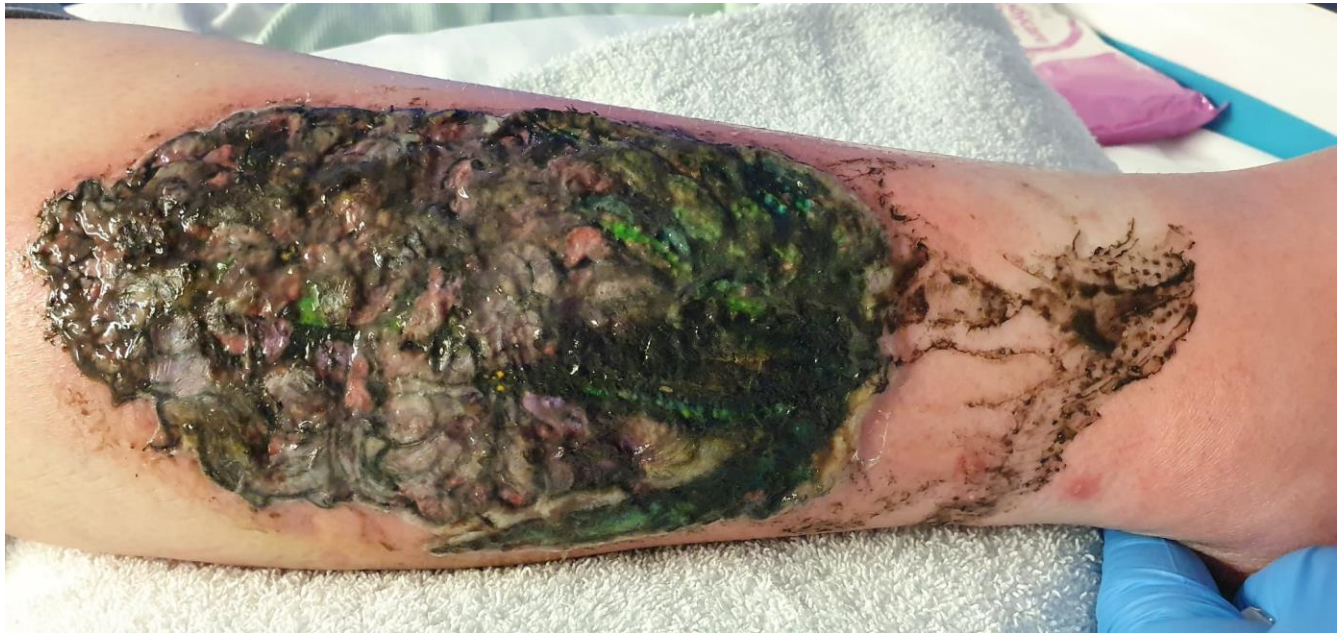
- What's included - JCCP x HF - Consultation document

Infection

- Bloodborne viruses (Hep B, Hep C, HIV)
- Practices to minimise exposure to blood must be in place
- Use of PPE
- Immunisation
- Skin infections
- Heat, Redness, Swelling, Pain, fever
- Allergic reaction to certain inks

Prevalence of Tattoo infections

- Prevalence of infections is unknown (not notifiable)
- Infection prevention and control procedures should include
  - Hand hygiene and skin care
  - PPE
  - Sharps and body fluid exposure controls
  - Waste handling
  - Cleaning and disinfection of the environment
- Tattooing premise should have a process in place for aftercare that ensures that clients knows how to recognise an infection and seek medical advice if necessary
- If they are notified by a client that and infection has occurred they are supposed to document this and take action and document what has been done.



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Surveys of Tattooing premises

- Hygiene in tattooing premises XR14 (2012-13)
  - Water
  - Swabbing of treatment areas

- Tattoo ink, water and green soap XR36 (2018-19)
  - Ink
  - Water used to make green soap
  - Diluted green soap used in tattooing process

XR14 Hygiene in Tattoo and Piercing Premises 2012-13

- 860 samples in total from 19 LA's
  - 232 waters
  - 591 swabs of treatment areas
  - 33 spray bottles
  - No ink

- 16% of waters had *Pseudomonas aeruginosa*
- 6% of swabs had ACC higher than expected
- 1.5% of swabs had *Staphylococcus aureus*
- 3% of spray bottles had *Pseudomonas aeruginosa*

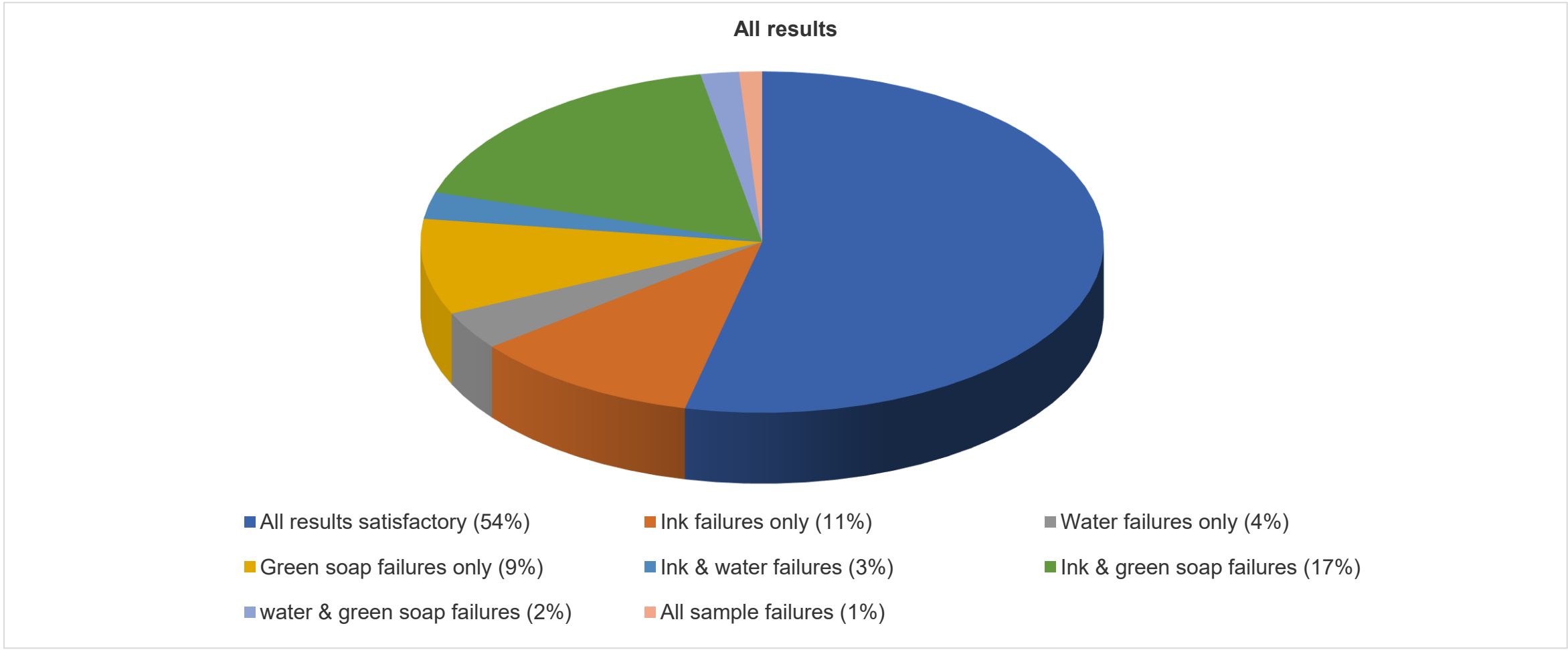
XR36 Results

- 33 Local Authorities participated in this survey collecting 1065 sample from 276 premises.

- 532 inks (20%)
- 262 diluted green soaps (25%)
- 271 waters (10%)

- 54% (148/276) premises gave all satisfactory results
- 46% (128/276) premises gave at least one unsatisfactory results
- 1% (3/276) premises gave unsatisfactory result for all samples tested

XR36 Reason for premises failures



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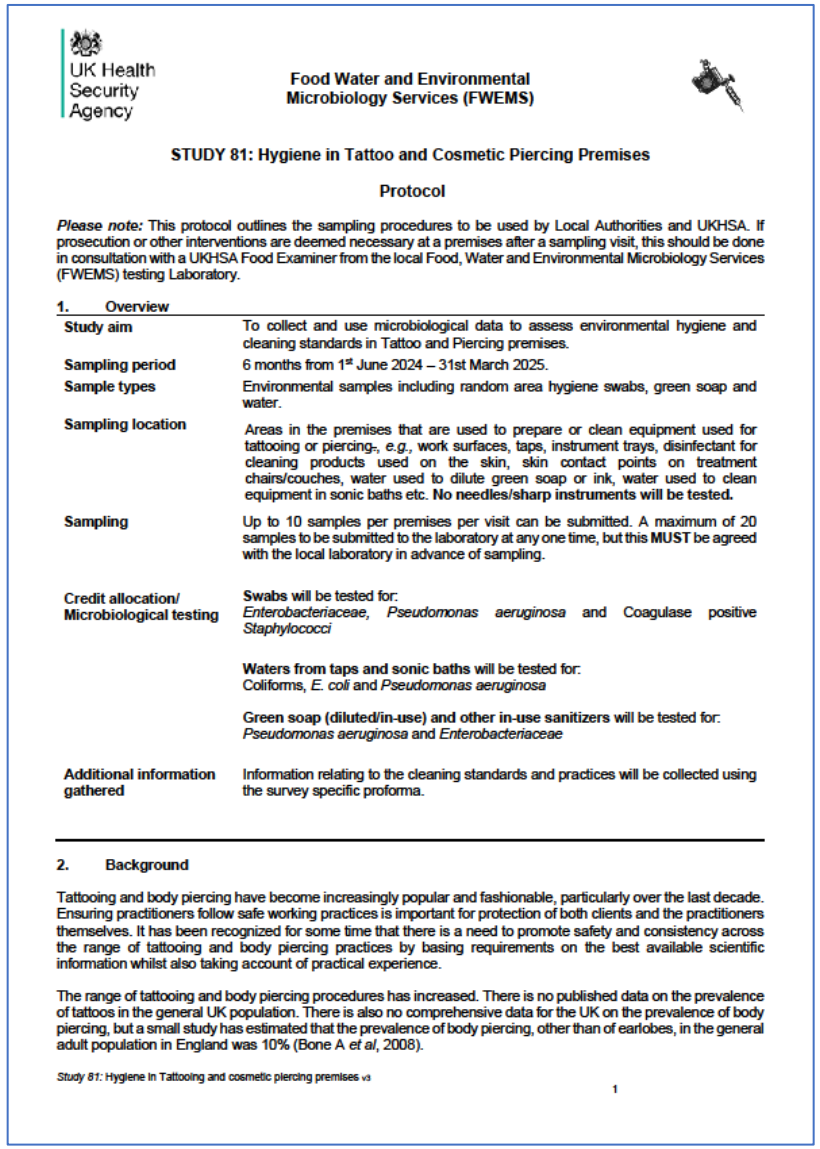
Study 81- June 2024- March 2025



UK Health Security Agency

Food Water and Environmental Microbiology Services (FWEMS)

STUDY 81: Hygiene in Tattoo and Cosmetic Piercing Premises

Protocol

Please note: This protocol outlines the sampling procedures to be used by Local Authorities and UKHSA. If prosecution or other interventions are deemed necessary at a premises after a sampling visit, this should be done in consultation with a UKHSA Food Examiner from the local Food, Water and Environmental Microbiology Services (FWEMS) testing Laboratory.

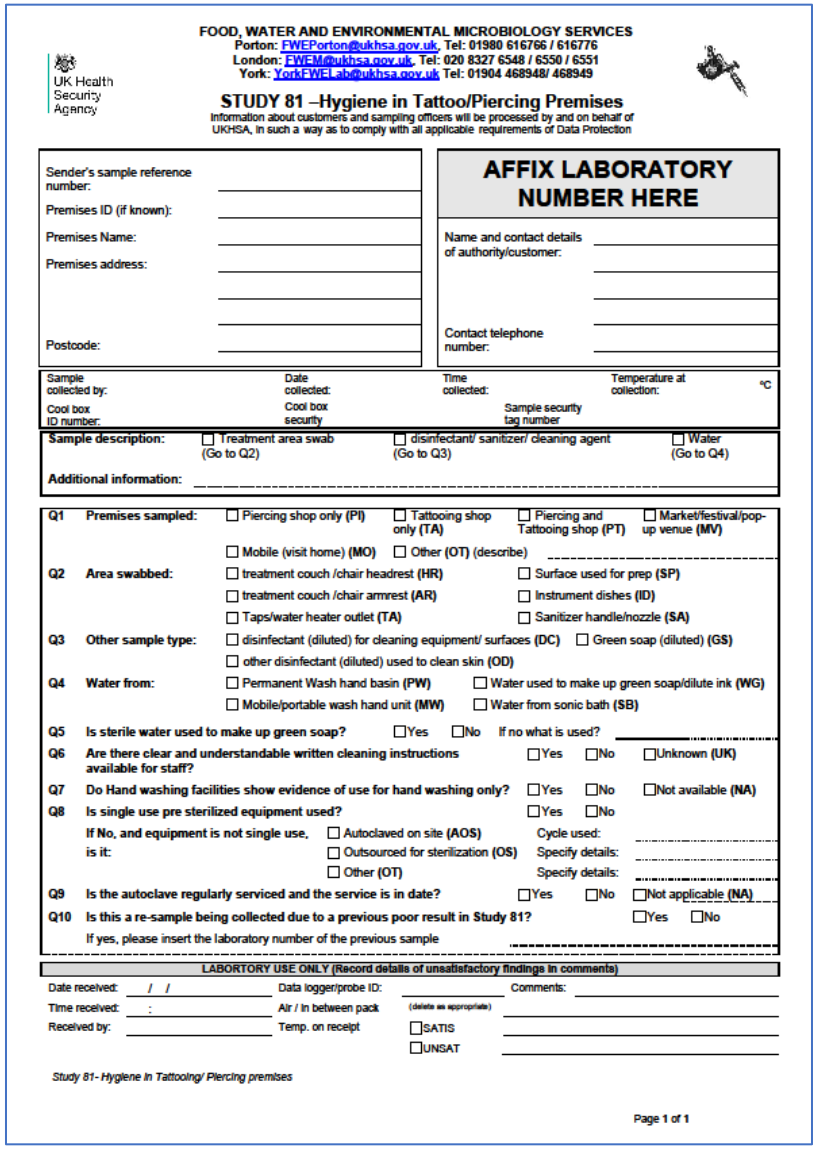
1. Overview

Study aim	To collect and use microbiological data to assess environmental hygiene and cleaning standards in Tattoo and Piercing premises.
Sampling period	6 months from 1st June 2024 – 31st March 2025.
Sample types	Environmental samples including random area hygiene swabs, green soap and water.
Sampling location	Areas in the premises that are used to prepare or clean equipment used for tattooing or piercing-, *e.g.*, work surfaces, taps, instrument trays, disinfectant for cleaning products used on the skin, skin contact points on treatment chairs/couches, water used to dilute green soap or ink, water used to clean equipment in sonic baths etc. **No needles/sharp instruments will be tested.**
Sampling	Up to 10 samples per premises per visit can be submitted. A maximum of 20 samples to be submitted to the laboratory at any one time, but this **MUST** be agreed with the local laboratory in advance of sampling.
Credit allocation/ Microbiological testing	**Swabs** will be tested for: *Enterobacteriaceae*, *Pseudomonas aeruginosa* and Coagulase positive *Staphylococci* **Waters from taps and sonic baths** will be tested for: Coliforms, *E. coli* and *Pseudomonas aeruginosa* **Green soap (diluted/in-use) and other in-use sanitizers** will be tested for: *Pseudomonas aeruginosa* and *Enterobacteriaceae*
Additional information gathered	Information relating to the cleaning standards and practices will be collected using the survey specific proforma.

2. Background

Tattooing and body piercing have become increasingly popular and fashionable, particularly over the last decade. Ensuring practitioners follow safe working practices is important for protection of both clients and the practitioners themselves. It has been recognized for some time that there is a need to promote safety and consistency across the range of tattooing and body piercing practices by basing requirements on the best available scientific information whilst also taking account of practical experience.

The range of tattooing and body piercing procedures has increased. There is no published data on the prevalence of tattoos in the general UK population. There is also no comprehensive data for the UK on the prevalence of body piercing, but a small study has estimated that the prevalence of body piercing, other than of earlobes, in the general adult population in England was 10% (Bone A *et al*, 2008).



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STUDY 81 –Hygiene in Tattoo/Piercing Premises

Information about customers and sampling officers will be processed by and on behalf of UKHSA, in such a way as to comply with all applicable requirements of Data Protection

Sender's sample reference number:
Premises ID (if known):
Premises Name:
Premises address:
Postcode:

AFFIX LABORATORY NUMBER HERE

Name and contact details of authority/customer:
Contact telephone number:

Sample collected by: | Date collected: | Time collected: | Temperature at collection: °C
Cool box ID number: | Cool box security | Sample security tag number

Sample description: ☐ Treatment area swab (Go to Q2) ☐ disinfectant/ sanitizer/ cleaning agent (Go to Q3) ☐ Water (Go to Q4)

Additional information:

Q1 Premises sampled: ☐ Piercing shop only (PI) ☐ Tattooing shop only (TA) ☐ Piercing and Tattooing shop (PT) ☐ Market/festival/pop-up venue (MV) ☐ Mobile (visit home) (MO) ☐ Other (OT) (describe)

Q2 Area swabbed: ☐ treatment couch /chair headrest (HR) ☐ Surface used for prep (SP) ☐ treatment couch /chair armrest (AR) ☐ Instrument dishes (ID) ☐ Taps/water heater outlet (TA) ☐ Sanitizer handle/nozzle (SA)

Q3 Other sample type: ☐ disinfectant (diluted) for cleaning equipment/ surfaces (DC) ☐ Green soap (diluted) (GS) ☐ other disinfectant (diluted) used to clean skin (OD)

Q4 Water from: ☐ Permanent Wash hand basin (PW) ☐ Water used to make up green soap/dilute ink (WG) ☐ Mobile/portable wash hand unit (MW) ☐ Water from sonic bath (SB)

Q5 Is sterile water used to make up green soap? ☐Yes ☐No If no what is used?

Q6 Are there clear and understandable written cleaning instructions available for staff? ☐Yes ☐No ☐Unknown (UK)

Q7 Do Hand washing facilities show evidence of use for hand washing only? ☐Yes ☐No ☐Not available (NA)

Q8 Is single use pre sterilized equipment used? ☐Yes ☐No
If No, and equipment is not single use, is it: ☐ Autoclaved on site (AOS) Cycle used: ☐ Outsourced for sterilization (OS) Specify details: ☐ Other (OT) Specify details:

Q9 Is the autoclave regularly serviced and the service is in date? ☐Yes ☐No ☐Not applicable (NA)

Q10 Is this a re-sample being collected due to a previous poor result in Study 81? ☐Yes ☐No
If yes, please insert the laboratory number of the previous sample

LABORTORY USE ONLY (Record details of unsatisfactory findings in comments)

Date received: / / | Data logger/probe ID: | Comments:
Time received: : | Air / In between pack (delete as appropriate)
Received by: | Temp. on receipt ☐SATIS ☐UNSAT

- Study 81 was originally to run from June – Nov 2024, due to popular demand it was extended to March 2025
- Restrictions on the number of samples that could be submitted had to be put in place at some labs to enable workload management.

Study 81 Samples (5345)

- Treatment area swabs (299/3214)
- Diluted disinfectant/ sanitiser/cleaning agent (228/988)
- Water (204/1197)

Q5 **Is sterile water used to make up green soap?** ☐Yes ☐No If no what is used? _____

Q6 **Are there clear and understandable written cleaning instructions available for staff?** ☐Yes ☐No ☐Unknown **(UK)**

Q7 **Do Hand washing facilities show evidence of use for hand washing only?** ☐Yes ☐No ☐Not available **(NA)**

Q8 **Is single use pre sterilized equipment used?** ☐Yes ☐No

If No, and equipment is not single use, is it:

- ☐ Autoclaved on site **(AOS)** Cycle used: _____
- ☐ Outsourced for sterilization **(OS)** Specify details: _____
- ☐ Other **(OT)** Specify details: _____

Q9 **Is the autoclave regularly serviced and the service is in date?** ☐Yes ☐No ☐Not applicable **(NA)**

Result Summary

		Ent	PS	SA	Any
Swabs	Sat	2974	3166	3175	2915
3214	Unsat	240	48	39	299
	%	7.47	1.49	1.21	9.30

		Col	EC	PS	Any
Water	Sat	1132	1196	1055	993
1197	Unsat	65	1	142	204
	%	5.43	0.08	11.86	17.04

		Ent	PS	Any
Diluent	Sat	796	847	761
989	Unsat	193	142	228
	%	19.51	14.36	23.05

		Ent	PS	Any
GS	Sat	515	623	491
691	Unsat	176	68	200
	%	25.47	9.84	28.94

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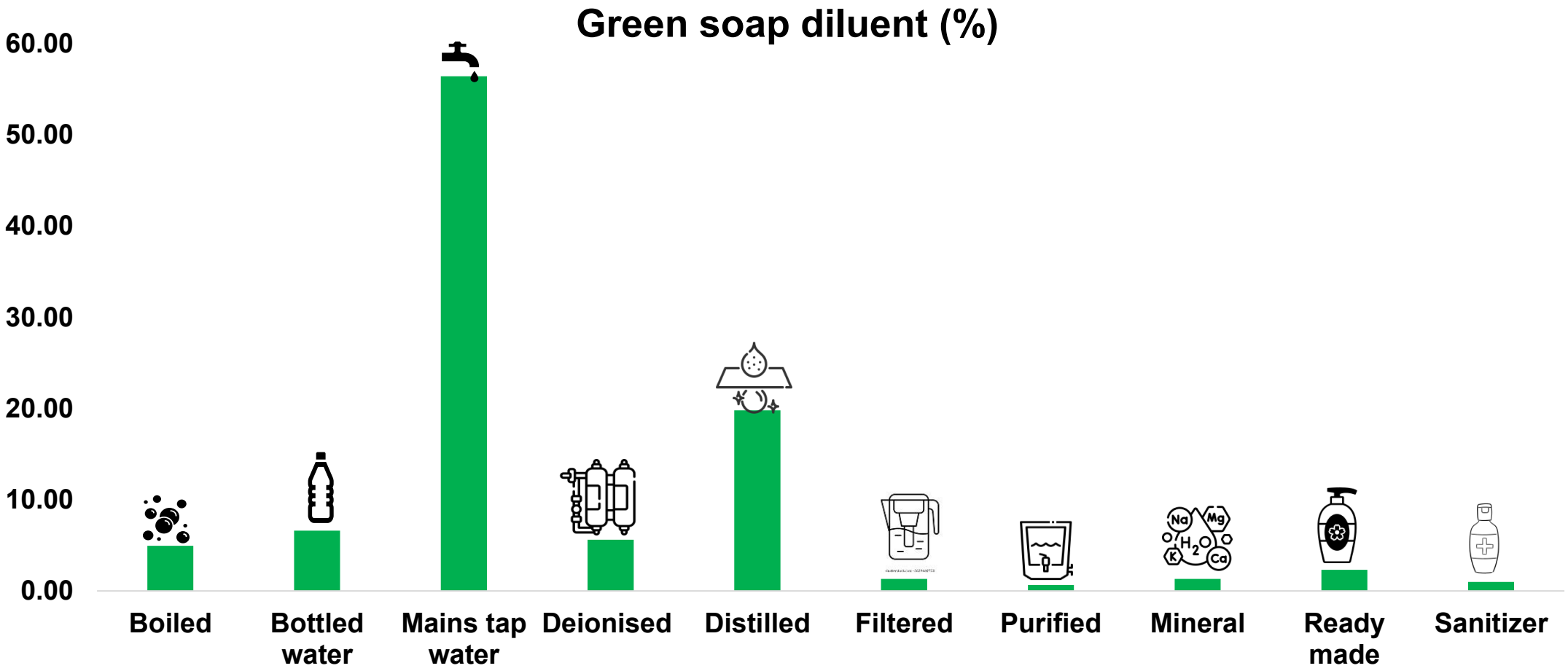
Dilution of green soap

- Diluted disinfectant/ sanitiser/cleaning agent (988)
- Diluted green soap (691)
- Concentrated green soap is made with vegetable oils, sodium or potassium hydroxide and glycerine
- Not inherently anti-microbial
- Can be mixed with alcohols, witch hazel , essential oils
- Many brands
- Green soap appears to be fundamental to the tattooing process but is not specifically mentioned in the toolkit.
- Diluted green soap does however come into contact with broken skin and based on risk should therefore ideally be sterile.

Diluting green soap for use



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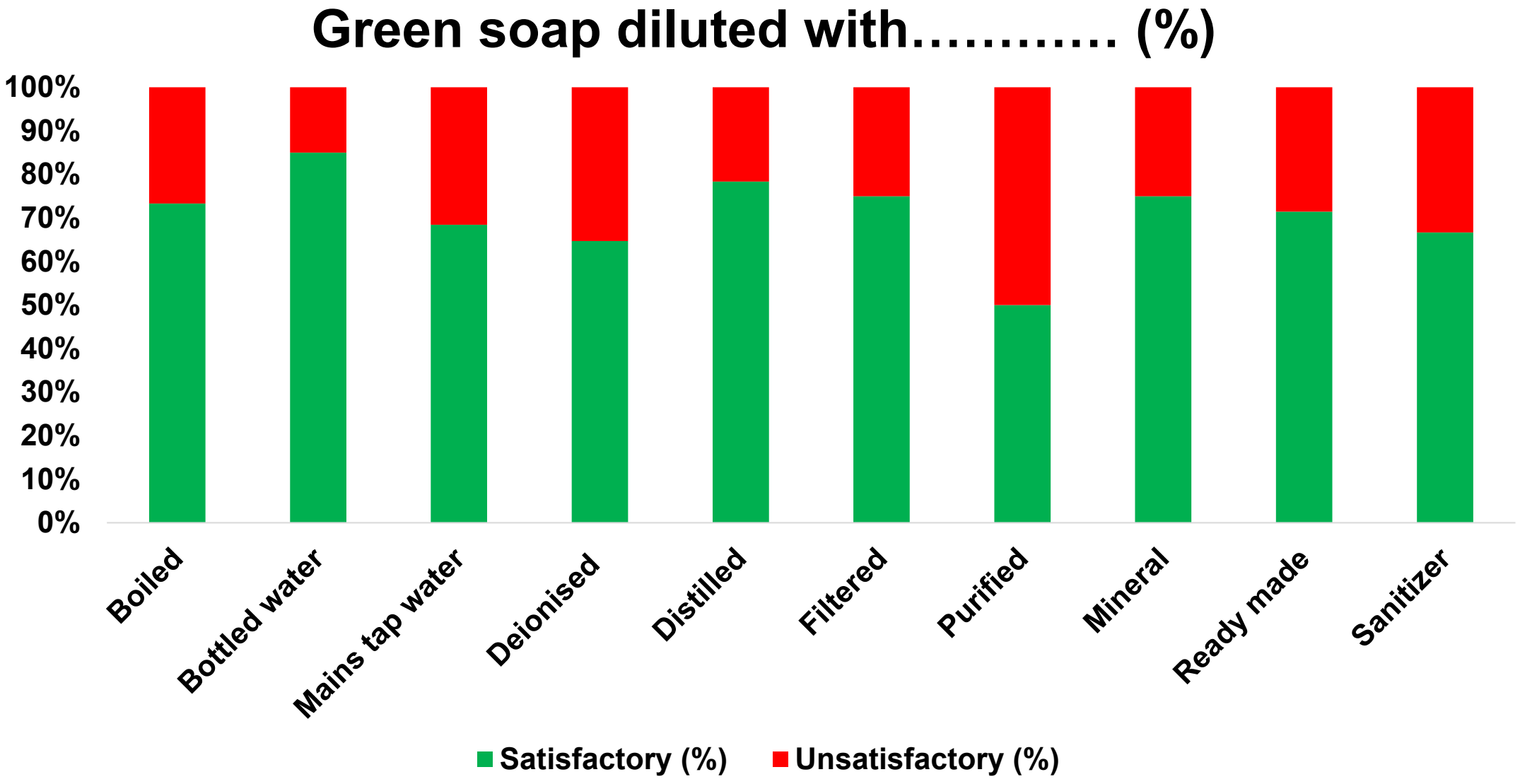

Provisional data Study 81

Summary

- Tattooing continues to increase in popularity
- An infected tattoo can lead to significance disfigurement
- Several studies by FWE have been done to look at hygiene in tattooing premises
- Study 81 ran June 2024 – March 2025 resulting in submission of more that 5000 samples nationally
- Approximately 10% of treatment area swabs were unsatisfactory
- Approximately 20% of water samples tested were either borderline or unsatisfactory
- Approximately 20% of diluted disinfectant were found to be unsatisfactory
- The use and handling of green soap in tattooing premises is not currently including in the tattooing toolkit. As it appears to be fundamental to the process and comes directly into contact with an open wound it should be.