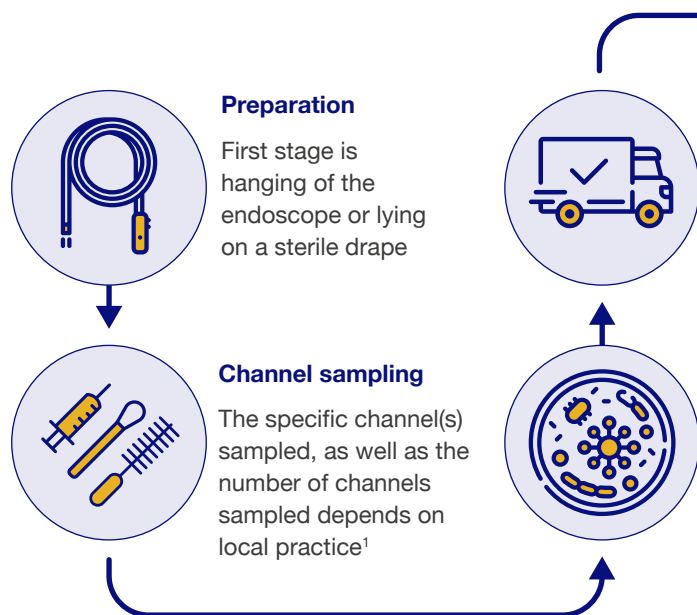


Sampling and culturing of flexible endoscopes:

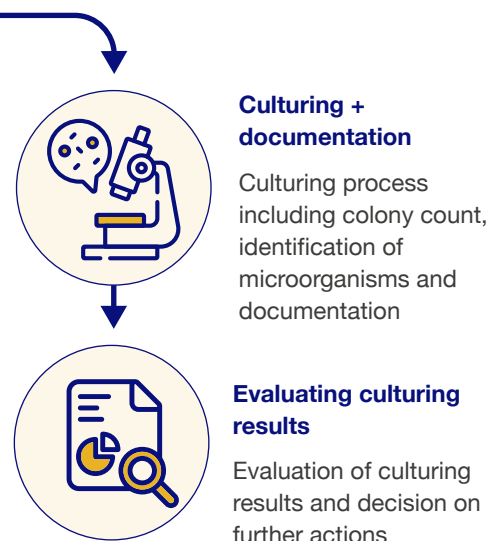
Stage one – the sampling process

Microbiological sampling and culturing is a multi-step surveillance testing technique. Stage one, the sampling process, involves sampling endoscope channels and critical areas of the endoscope. Stage two, the culturing process, evaluates collected samples to detect any contamination still present after reprocessing.¹

Stage one: the sampling process^{2,3}

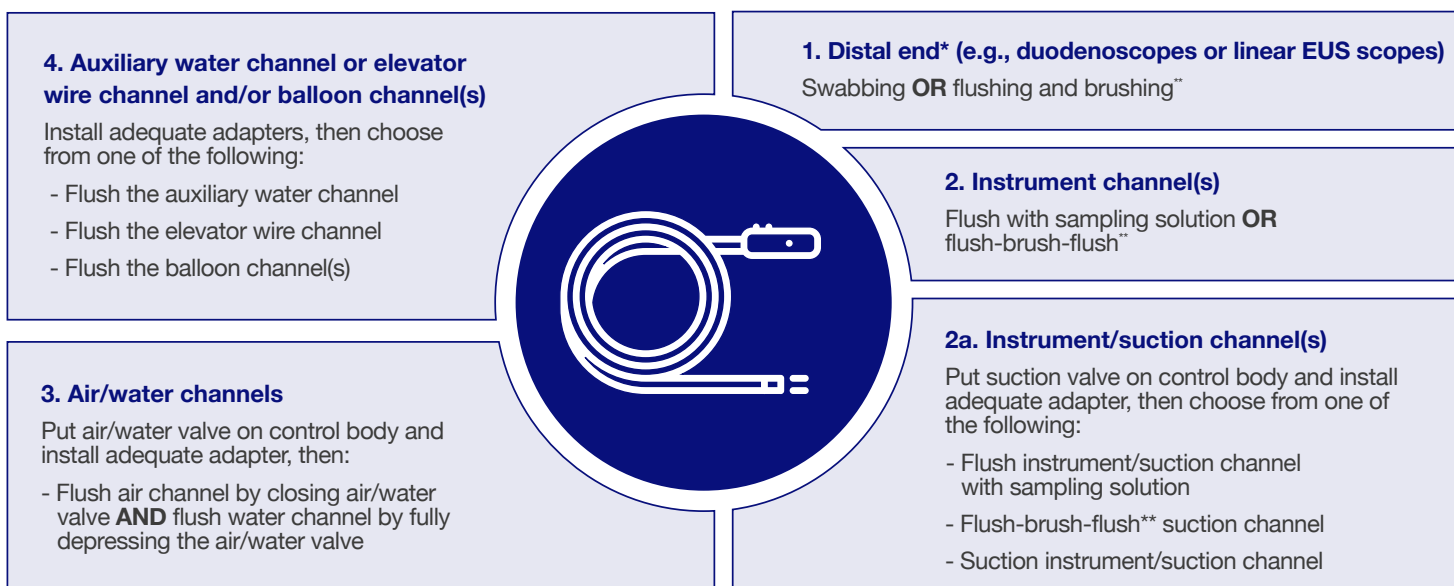


Stage two: the culturing process^{2,3}



Channel sampling examples^{2,3}

Although the sampling and culturing of endoscopes is commonplace in many countries, national guidelines and laws on hygiene and infection control vary and are based on historic regional/national level evidence¹



* To reach all surfaces around the forceps elevator, move the elevator up and down

** The brush head can be put into the corresponding sample/ collection container

Sampling essentials^{2,3}



Endoscope must first be **reprocessed and dry**



Flushing sampling fluid is followed by air to make sure that the **sample volume recovered is as close as possible to the volume injected**



Use only **sterile sampling materials** such as: sample/collection containers, syringes, brushes, endoscope valves and adapters



Both quality assurance and monitoring needed:

- Description of methods
- Who is carrying out the sampling, e.g. two qualified persons
- Which endoscope models, channels and critical areas should be sampled
- Frequency of sampling
- Evaluation of laboratory report and potential actions



Aseptic technique always required



Sample collection considerations

- There should be sufficient properties for recovering microorganisms (surfactant activity)
- If not using a neutralizer to stop residual activity of the disinfectant during channel flushing, neutralizing of the sampling solution must be as fast as possible
- Sampling solution (including neutralizer) must not influence the viability and the growth of microorganisms
- All collection containers must be clearly labelled
- All collection containers must be refrigerated if not transported to laboratory within 4 hours
- Also note remaining sample volume can be used as enrichment culture

Further information can be found:

Tips, Tricks and Insights for Endoscope Sampling and Culturing
US endoscopy study: Sampling, culturing, and evaluating correctly
Understanding the Differences in Sampling & Culturing of Flexible Endoscopes: Why we need a unified approach



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References
1. Olympus. Understanding the Differences in Sampling & Culturing of Flexible Endoscopes: Why we need a unified approach. Available online at: <https://infectionprevention.olympus.com/en-us/scientific-evidence/publications/understanding-differences-sampling-culturing>. Accessed February 2023 2. Olympus. Tips, Tricks and Insights for Implementation and Management of an Endoscope Sampling and Culturing Program. Available online at: <https://infectionprevention.olympus.com/en-us/scientific-evidence/publications/sampling-and-culturing>. Accessed February 2023; 3. Olympus. US endoscopy study: Sampling, culturing, and evaluating correctly. Available online at: <https://infectionprevention.olympus.com/en-us/scientific-evidence/publications/endoscopes-sampling-culturing>. Accessed February 2023