

	Technical Information	730-082-EN		V03
	Which effects has the use of non-demineralized feeding water for steam generation of steam sterilization processes?	Created	15.07.2007	UK
		Changed	02.09.2021	KP
		Checked	02.09.2021	UK
		Released	02.09.2021	UK
File no.: 1.1 + 1.1.2				

The water quality of the feeding water can cause corrosion and deposit stains on sterilizer and instruments and is critical to steam quality. Non-condensable gases (NCG) are basically formed by salts (hydrogen carbonates) present in the water when the water is heated, producing CO₂ and carbonate salts. Since the feeding water is not demineralized, NCG peaks occur during sterilization, which, depending on the time of introduction in the sterilisation process and the type of load, can harm the sterilization result, especially of minimally invasive surgical (MIC) instruments. The type of hazard also depends on the type of steam generation, piping and other conditions, so that an exact statement about non-demineralized feeding water can only be made when a sterilization process is validated.

NCG can also be additionally generated by inadequate air removal, leakages in the sterilizer or pneumatically sealed sterilizer doors.

If time-limited, non-reproducible errors occur repeatedly, we generally recommend carrying out a NCG analysis in steam according to EN 285.