borer medical

deconex®

Instrument reprocessing – deconex® 28 ALKA ONE-x destabilizes the infectious prion protein

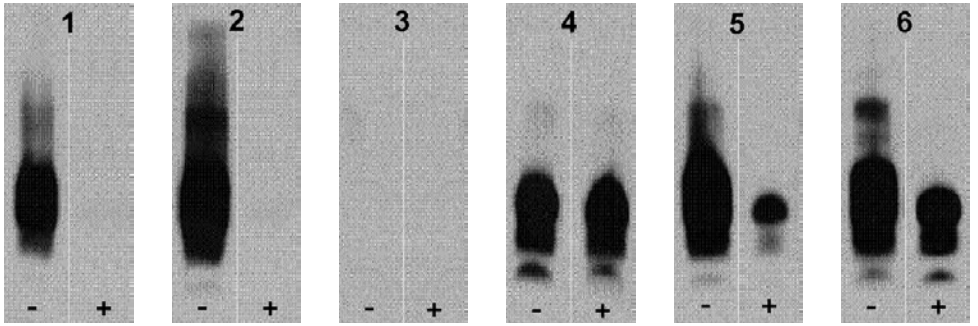
A treatment of the brain extract of sick hamsters that abolishes the proteinase K resistance of prion proteins is also able to reduce the infectivity of the prion protein or even eliminate it. This claim is confirmed by results from animal experiments in connection with decontamination processes based on deconex® 28 ALKA ONE-x.

In vitro effect on the prion protein in the brain extract of sick hamsters

(suspension experiment with Western Blot analysis / immunological detection)

1	0.5%	**deconex® 28 ALKA ONE-x**	pH 11.1	10 min	70 °C
2	1.0%	**deconex® 28 ALKA ONE-x**	pH 11.5	10 min	55 °C
3	1.0% 0.3%	**deconex® 28 ALKA ONE-x +** **deconex® TWIN ZYME**	pH 11.5	10 min	55 °C
4	0.5% 0.15%	**deconex® 28 ALKA ONE-x +** **deconex® TWIN ZYME**	pH 11.1	10 min	55 °C
5	0.056%	KOH	pH 12.0	10 min	70 °C
6	Phosphatpuffer (PBS)		pH 7.4	10 min	70 °C

+/-: Proteinase K



The infectious prion protein is proteinase K resistant. A treatment of the brain extract with phosphate buffer (**6**) (neg. control) or with 0.5% deconex® 28 ALKA ONE-x + 0.15% deconex® TWIN ZYME at 55 °C (**4**) showed no effect on its proteinase K resistance.

In contrast, proteinase K was able to digest the prion protein after the brain extract had been treated with deconex® 28 ALKA ONE-x at 0.5% / 70 °C (**1**) or 1.0% / 55 °C (**2**). When 1.0% deconex® 28 ALKA ONE-x together with 0.3% deconex® TWIN ZYME at 55 °C (**3**) was used for treatment, the (destabilized) prion protein was degraded through the action of the proteases in deconex® TWIN ZYME alone, without the additional action of proteinase K.

The treatment of the brain extract with potassium hydroxide at pH 12 (**5**) however showed less effect on the prion protein as a residue of proteinase K resistant material on the Western Blot shows.

Experiments carried out by SMP GmbH Prüfen Validieren Forschen

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1-201005-101-en

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