



## **Røde kro 2015. Vurdering af udviklingen i den naturlige nedbrydning i nedstrømsforureningsfane efter kildeoprensning**

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*Publication date:*  
2015

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*

Broholm, M. M., Badin, A., Jacobsen, C. S., & Hunkeler, D. (2015). *Røde kro 2015. Vurdering af udviklingen i den naturlige nedbrydning i nedstrømsforureningsfane efter kildeoprensning*. DTU Miljø.

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Bilag 6: Liste over bakterier som er kendt for nedbrydning af chlorerede ethener.

From	To	Anaerobic /Aerobic	How	Microorganism	Ref	Ref
cDCE	to CO2	Aerobic	oxidation	<i>B-proteobacterium</i>	Abe 2009	C and Cl isotope fractionation during aerobic oxidation and reductive deCl...
TCE	to CO2	Aerobic	Oxidation	<i>Burkholderia cepacia</i>	Barth 2002	Environmental isotopes in biodegradation and bioremediation Chap 4
TCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Dehalobacter restrictus</i>	Lee, Conrad, Alvarez-Cohen 2007	Environmental isotopes in biodegradation and bioremediation Chap 4
PCE	to Ethene	Anaerobic	Reductive dechlorination	<i>Dehalococcoides</i>	Maymo-Gatell AEM 1997 Fletcher 2011	
PCE	only to transDCE	Anaerobic	Reductive dechlorination	<i>Dehalococcoides</i>	Marco-Urrea 2011	Transformation and C isotope fractionation of PCE and TCE
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Desulfitobacterium</i>	Cichocka 2007 Suyama 2001 Nijenhuis 2005	Environmental isotopes in biodegradation and bioremediation Chap 4 EPA guide for assessing biodegradation - not exactly same values
PCE	to TCE	Anaerobic	Reductive dechlorination	<i>Desulfitobacterium</i>	Cichocka 2008 Löffler 1997 Maillard 2004, thèse Löffler et al. AEM 1997	Environmental isotopes in biodegradation and bioremediation Chap 4
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Desulfuromonas michiganensis</i>	Liang 2007 sung 2003 Maillard 2004, thèse	Distinguishing abiotic and biotic transformation of PCE and TCE
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Geobacter lovleyii</i>	Cichocka 2008 Sung 2006	Environmental isotopes in biodegradation and bioremediation Chap 4
VC	CO2? Cometabolism	Aerobic	Cometabolic oxidation	<i>Methylosinus trichosporium</i>	Chu 2004	Environmental isotopes in biodegradation and bioremediation Chap 4
cDCE	CO2? Cometabolism	Aerobic	Cometabolic oxidation	<i>Methylosinus trichosporium</i>	Chu 2004	Environmental isotopes in biodegradation and bioremediation Chap 4
TCE	CO2? Cometabolism	Aerobic	Cometabolic oxidation	<i>Methylosinus trichosporium</i>	Chu 2004	Environmental isotopes in biodegradation and bioremediation Chap 4

VC		Aerobic	Oxidation	<i>Mycobacterium</i>	Chartrand 2005	Environmental isotopes in biodegradation and bioremediation Chap 4
VC	CO2? Cometabolism	Aerobic	Cometabolic oxidation	<i>Mycobacterium vaccae</i>	Chu 2004	Environmental isotopes in biodegradation and bioremediation Chap 4
VC	to ethene	Aerobic	Oxidation	<i>Nocardioides</i>	Chartrand 2005	Environmental isotopes in biodegradation and bioremediation Chap 4
cDCE	to ethene?	Aerobic	Oxidation	<i>Polaromonas</i>	Abe 2009	Environmental isotopes in biodegradation and bioremediation Chap 4
PCE	to TCE	Anaerobic	Reductive dechlorination	<i>Sulfurospirillum</i>	Buttet 2013	
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Sulfurospirillum</i>	Buttet 2013	
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Sulfurospirillum multivorans</i>	Nijenhuis 2005	Environmental isotopes in biodegradation and bioremediation Chap 4 EPA guide for assessing biodegradation
PCE	to cisDCE	Anaerobic	Reductive dechlorination	<i>Sulfurospirillum halorespirans</i>	Cichocka 2007 Luijten 2003	Environmental isotopes in biodegradation and bioremediation Chap 4 EPA guide for assessing biodegradation
PCE	TCE	Anaerobic	Reductive dechlorination	<i>Sporomusa ovata</i>	Terzenbach 1994	
PCE	TCE	Anaerobic	Reductive dechlorination	<i>Acetobacterium woodii</i>	Terzenbach 1995	
PCE	TCE	Anaerobic	Reductive dechlorination	<i>Clostridium formicoaceticum</i>	Terzenbach 1996	
PCE	TCE	Anaerobic	Reductive dechlorination	<i>Methanlobus tindarius</i>	Terzenbach 1997	
PCE	TCE	Anaerobic	Reductive dechlorination	<i>Methanosarcina</i>	Fathepure 1987	
TCE	cisDCE + traces tDCE VC Ethene	Anaerobic	Reductive dechlorination	<i>Methanosarcina</i>	Jablonski 1992	
		Anaerobic	Reductive dechlorination	<i>Dehalogenimonas</i>	Richardson 2013	
		Anaerobic	Reductive dechlorination	<i>Anaeromyxobacter</i>	Richardson 2013	

		Anaerobic	Reductive dechlorination	<i>Desulfonomile</i>	Richardson 2013	
		Anaerobic	Reductive dechlorination	<i>Desulfovibrio</i>	Richardson 2013	
		Anaerobic	Reductive dechlorination	<i>Dehalobium</i>	Richardson 2013	
				<i>Dehalospirillum</i>		