skupina 2

Jonáš + Eliška

- k dispozici máte max. 100 mg alachloru

	1. Alachlor
CAS number	15972-60-8
Molecular formula	$C_{14}H_{20}ClNO_2$
Molecular mass [g/mol]	269.77
Density [g/cm^3]	1.12 g/cm^3
Water solubility; 20°C [g/l]	0.24[g]
Vapour pressure; 20°C [Pa]	< 2.9e-3[g]
Boiling point [°C]	100[g]
Melting point [°C]	41[g]
Kow (log P)	3.09[g]
Safety information = R-/S- statements	R: 22-40-43-50/53-67-65-38-11-52/53-39/23/24/25-23/24/25-51/53, S: 36/37-46-60-61-62-45 [h]
EFFECT CONCENTRATIONS in **ug/L** from US EPA ECOTOX Database	
EC50 : *Raphidocelis subcapitata* *	19.68
EC50 : *Daphnia magna*	21850.00
EC50: *Vibrio fischeri*	128730*
CONCENTRATIONS TO BE TESTED **mg/L** or **ug/L** and **DF=Dilution Factor**	
Raphidocelis subcapitata (green algae)	**0.64-3.2-16-80-400 ug/L (DF=5)**
Daphnia magna (invertebrates)	**6.25-12.5-25-50-100 mg/L (DF=2)**
Vibrio fischeri (bacteria)	**12.5-25-50-100-200mg/L (DF=2)**

Notes:

* experimental data RECETOX, December 2013, Zuzana Rabova

*Bonnet, J., Bonnemoy, F., Dusser, M., Bohatier, J., & Pascal, B. (2007). Assessment of the Potential Toxicity of Herbicides and Their Degradation Products to Nontarget Cells Using Two Microorganisms , the Bacteria Vibrio fischeri and the Ciliate Tetrahymena pyriformis, 78–91. doi:10.1002/tox

skupina 1	skupina 1
Zuzka + Anička	**Jana + Jarka**
- k dispozici máte chlorid kademnatý $CdCl_2$, zadané koncentrace v ředicích řadách udávají koncentraci **kadmia** v testu	- k dispozici máte max. 100 mg chlorpyrifosu
2. Cadmium chloride	**3. Chlorpyrifos**
10108-64-2	2921-88-2
$CdCl_2$	$C_9H_{11}Cl_3NO_3PS$
183.32	350.59
4.047 g/cm^3	1.398 g/cm^3 (43.5 °C)
1400[i]	1.1e-3[c]
insignificant[j]	1.43e-3[c]
967[i]	170 - 180[c]
568[i]	41-42[c]
NR	4.7[c]
R: 45-46-60-61-25-26-48/23/25-51/53-50/53-48/20/22-23-22 , S: 53-45-61-60-36/37-28 [j]	R20/22-65-38-50/53, S24-36/37-46-60-61[d]
4045.67**	4060
72.97	0.93
23220*	2840*
CONCENTRATION OF CADMIUM	
0.625-1.25-2.5-5-10 mg/L (DF=2) **1.6-8-40-200-1000 ug/L (DF=5)** **3.125-6.25-12.5-25-50 mg/L (DF=2)**	**0.04-0.2-1-5-25 mg/L (DF=5)** **0.016-0.08-0.4-2-10 ug/L (DF=5)** **0.625-1.25-2.5-5-10 mg/L (DF=2)**

*Macken, A., Giltrap, M., Ryall, K., Foley, B., McGovern, E., McHugh, B., & Davoren, M. (2009). A test battery approach to the ecotoxicological evaluation of cadmium and copper employing a battery of marine bioassays. *Ecotoxicology (London, England)* , *18* (4), 470–80. doi:10.1007/s10646-009-0305-6

*Palma, P., Palma, V. L., Fernandes, R. M., Soares, a M. V. M., & Barbosa, I. R. (2008). Acute toxicity of atrazine, endosulfan sulphate and chlorpyrifos to Vibrio fischeri, Thamnocephalus platyurus and Daphnia magna, relative to their concentrations in surface waters from the Alentejo region of Portugal. *Bulletin of environmental contamination and toxicology* , *81* (5), 485–9. doi:10.1007/s00128-008-9517-3

Rapidocelis EC50: Cd 2480

	skupina 2
Pozitivní kontrola	**Eva + Veronika**
- k dispozici máte dichroman draselný $K_2Cr_2O_7$, zadané koncentrace v ředicích řadách udávají koncentraci **dichromanu draselného** v testu	- k dispozici máte max. 100 mg paraquat dichloridu
PC - Chromium - potassium dichromate	**4. Paraquat dichloride**
7778-50-9	1910-42-5
$K_2Cr_2O_7$	$C_{12}H_{14}Cl_2N_2$
294.19	257.16
2.676 g/cm^3	1.25 g/cm^3
125[m]	620[b]
insignificant[n]	<0.0001[b]
500	NR
398	>300[b]
NR	- 4.5[b]
R: 45-46-60-61-8-21-25-26-34-42/43-48/23-50/53-52/53-20-48/20-23-51/53-22-36/37/38 , S: 53-45-60-61-36/37-23-26 [m]	R: 24/25-26-36/37/38-48/25-50/53; S: (1/2)-22-28-36/37/39-45-60-61 [b]
3051.10	32.71
374.40	2430.46
333700*(6000**)	14800*(347000**)
CONCENTRATION OF POTASSIUM DICHROMATE	
1.25-2.5-5-10 mg/L (DF=2) **0.05-0.1-0.2-0.4-0.8 mg/L (DF=2)** **53 mg/L**	**0.004-0.02-0.1-0.5-2.5 mg/L (DF=5)** **0.625-1.25-2.5-5-10 mg/L (DF=2)** **3.125-6.25-12.5-25-50 mg/L (DF=2)**
*Fulladosa, E., Murat, J. C., & Villaescusa, I. (2005). Effect of cadmium(II), chromium(VI), and arsenic(V) on long-term viability- and growth-inhibition assays using Vibrio fischeri marine bacteria. *Archives of environmental contamination and toxicology* , *49* (3), 299–306. doi:10.1007/s00244-004-0170-5	- *Barceló, D. (2006). Emerging Organic Pollutants in Waste Waters and Sludge: Vol. , Springer, p. 68, 31 Mar 2014 < http://books.google.cz/books?id=kbYG-dQsQYsC&pg=PA68&lpg=PA68&dq=paraquat+vibrio+fischeri+EC50&source=bl&ots=PA-SyALFXp&sig=-MUOaMwPdB9PGVo4Pz6oiAFR4cU&hl=en&sa=X&ei=21s5U6-ZGILiywPAyoKADw&ved=0CD4Q6AEwAg#v=onepage&q=paraquat%20vibrio%20fischeri%20EC50&f=false>

** experimental data RECETOX, Petr Masner

**Van der Schalie, W. H., James, R. R., & Gargan, T. P. (2006). Selection of a battery of rapid toxicity sensors for drinking water evaluation. Biosensors & bioelectronics, 22(1), 18–27. doi:10.1016/j.bios.2005.11.019

skupina 3 **Amrita + Marie?**	skupina 3 **Libor + Radim**	
- k dispozici máte max. 1g triclosanu	- k dispozici máte max. 100 mg dodinu	
5. Triclosan	**6. Dodine**	Sources
3380-34-5	2439-10-3	[a] http://wirud-ingredien
$C_{12}H_7Cl_3O_2$	$C_{15}H_{33}N_3O_2$	[aa] http://www.chemicalb
289.54	287.44	[b] http://www.inchem.org
1.49 g/cm^3	0.9±0.1 g/cm3	
0.01[a]	0.63[t]	[c] http://ec.europa.eu/foo
7e-4[a]	1.3[t]	[d] http://www.ellagret.gr/
120		[e] https://circabc.europa
56 - 58[a]	136[t]	[f] http://www.capl.sci.eg/
4.8[a]	-0.88[u]	[g] http://sitem.herts.ac.u
R: 36/38-50/53-36/37/38 , S: 26-39-46-60-61-24/25-22-36 [aa]	R22-R36/38-R50/53, S26-S60-S61	[h] http://www.chemicalbo
		[i] http://ces.iisc.ernet.in/e
0.53-4.46	900.00	[j] http://www.chemicalbo
301.39	39.41	[k] http://www.chemicalbo
280*	862.32*	[n] http://www.acs.org/co
0.4-2-10-50-250 ug/L (DF=5) **62.5-125-250-500-1000 ug/L (DF=2)** **1.6-8-40-200-1000 ug/L (DF=5)**	**0.25-0.5-1-2-4 mg/L (DF=2)** **1.6-8-40-200-1000 ug/L (DF=5)** **0.25-0.5-1-2-4 mg/L (DF=2)**	[o] http://www.chemicalbo [p] http://www.cdpr.ca.go [q] http://www.chemicalbo [s] http://datasheets.scbt. [t] http://extoxnet.orst.edu

*Farré, M., Asperger, D., Kantiani, L., González, S., Petrovic, M., & Barceló, D. (2008). Assessment of the acute toxicity of triclosan and methyl triclosan in wastewater based on the bioluminescence inhibition of Vibrio fischeri. Analytical and bioanalytical chemistry, 390(8), 1999–2007. doi:10.1007/s00216-007-1779-9

* EC50 approximated from EC50 for *Vibrio qinghaiensis reported in:* Liu, S.-S., Wang, C.-L., Zhang, J., Zhu, X.-W., & Li, W.-Y. (2013). Combined toxicity of pesticide mixtures on green algae and photobacteria. Ecotoxicology and environmental safety, 95, 98–103. doi:10.1016/j.ecoenv.2013.05.018

ts.com/certificates/subs/8_1.html
ook.com/ProductChemicalPropertiesCB6771432_EN.htm
g/documents/icsc/icsc/eics0005.htm

od/plant/protection/evaluation/existactive/list_chlorpyrifos.pdf
'images/products/1248255789-CHLORPYRIFOS%20AGRODAN%2048%20EC%20MSDS.pdf
.eu/sd/d/83797096-6bc1-440f-8c35-561919feb2bf/Propiconazole_PT09_draft AR.pdf
/ActiveIngredient/Propiconazole.html
k/aeru/ppdb/en/17.htm

ook.com/ChemicalProductProperty_US_CB2437008.aspx

energy/HC270799/HDL/ENV/enven/vol319.htm#cadmium

ok.com/ChemicalProductProperty_EN_CB9687792.htm
ook.com/ProductChemicalPropertiesCB0396495_EN.htm
ntent/dam/acsorg/about/governance/committees/chemicalsafety/safetypractices/clip-potassium-dichromat

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u/pips/dodine.htm

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