

Form IX **DATA FORM FOR THE ESTIMATION OF THE HENRY'S LAW
CONSTANT FOR A COMPOUND IN THE BIOLOGICAL TREATMENT UNIT**

NAME OF THE FACILITY for site specific biorate determination		example
COMPOUND for site specific biorate determination		<i>methanol</i>
LISTED HENRY'S LAW VALUE AT 25 degrees Celsius. (Table 1, ratio of mol fraction in gas to mole fraction in water)	1	.2885
TEMPERATURE of the liquid in the unit (deg.C)	2	25
CALCULATION OF K		
Temperature adjusted Henry's law value (equals the value on line 1 if the temperature on line 2 is 25)	3	0.2885
Discuss basis of temperature adjustment		
Temperature in degrees Kelvin. Add 273.16 to the number on line 2. Enter the results here.	4	298.1600
Temperature ratio. Divide 273.16 by the number on line 4. Enter the results here.	5	0.9162
Henry's Law adjustment factor. Multiply the number on line 5 by 0.804 and enter the results here.	6	0.7366
Henry's Law value (g/m ³ gas per g/m ³ liquid) Multiply the number on line 3 by the number on line 6 and divide the results by 1000. Enter the results here and on Form V line 6.	7	0.000213
Henry's Law value (atm m ³ per mol) Divide the number on line 3 by 55555 and enter the results here.	8	0.000005