

PROYECTO EFA183/16 OUTBIOTICS

Tecnologías innovadoras para diagnóstico, prevención y eliminación de contaminantes emergentes (antibióticos) de las aguas del territorio POCTEFA
(Programa Interreg-POCTEFA 2014-2020)

ACTION 3. DETECTION AND QUANTIFICATION OF RESISTANT ANTIBIOTICS AND BACTERIA IN THE AREA OF INFLUENCE OF INTENSIVE FARMS

DELIVERABLE E.3.2.1. Database of diagnosis of antibiotic pollution in POCTEFA waters

Water and Environmental Health Research Group (UNIVERSITY OF ZARAGOZA) in collaboration with IPREM CNRS

Document prepared by Samuel Moles Algarra, from the Water and Environmental Health Research Group of the University of Zaragoza (Spain) and Joanna Szpunar, from IPREM-CNRS, within the Project (EFA 183/16/OUTBIOTICS "Innovative technologies for the diagnosis, prevention and elimination of emerging pollutants (antibiotics) from the POCTEFA territory" (EUROPEAN UNION. Interreg-POCTEFA Program 2014-2020), under the supervision of María P. Ormad.

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SAMPLE CODE	RIVER OR CONTROLLED WASTEWATER	LOCATION	SULFADIAZINE (ng/l)					
			Spring 2018	Autumn 2018	Spring 2019	Autumn 2019	Autumn 2020	Spring 2021
1_ASE	Segre River	Torres de Segre	n/d	D	D	5	120	9
2_ASE	Noguera Ribagorzana River	Corbins	D	D	D	28	214	118
3_ASE	Clamor Amarga River	Zaidín	300	19	D	3	227	16
4_ASE	Cinca River	Fraga	n/d	D	D	3	325	4
5_ASE	Alcanadre River	Sariñena	n/d	n/d	D	8	n/d	1
6_ASE	Flumen River	Albatillo	D	40	D	2	95	30
7_ASE	Gállego River	San Mateo de Gállego	n/d	D	D	34	85	1
8_ASE	Arba de Riquel River	Ejea de los Caballeros	D	n/d	n/d	18	521	3
9_ASE	Aragon Subordan River	Javierregay	n/d	n/d	n/d	n/d	50	n/d
10_ASE	Aragon River	Caparroso	n/d	n/d	n/d	1	12	n/d
11_ASE	Irantzu River	Estella	n/d	21	n/d	4	144	27
12_ASE	Arakil River	Irañeta	n/d	23	D	20	13	2
13_ASE	Queiles River	Novallas	D	n/d	n/d	1,5	12	2
14_ASE	Alhama River	Alfaro	n/d	n/d	n/d	2	13	3
15_ASE	Ega River	Estella	D	n/d	n/d	2	20	14
16_ASE	Ega River	Estella	n/d	n/d	D	n/d	11	n/d
17_ASE	Arga River	Arazuri	n/d	D	258	1,6	n/d	n/d
18_ASE	Arga River	Ororbía	D	16	D	2	n/d	7
19_ASE	Ebro River	Fontellas	D	D	D	12	n/d	n/d
20_ASE	Ebro River	Tudela	n/d	n/d	D	77	n/d	n/d
21_ASC	Bidasoa River	Bera	n/d	19	264	2	n/d	n/d
22_ASC	Bidasoa River	Bera	n/d	20	D	8	n/d	5
23_ASA/G	Adour River	Bayona	n/d	D	437	15	n/d	n/d
24_ASA/G	Gabas River	Poursiugues-Boucoue	D	n/d	n/d	n/d	8	3
25_ASA/G	Garonne River	Toulouse	n/d	D	n/d	n/d	9	3
26_ASA/G	Save River	Le Castéra	n/d	D	D	0,7	n/d	n/d
27_ASA/G	Echez River	Maubourquet	n/d	n/d	n/d	1	12	n/d
28_ASA/G	Baise River	Fontrailles	D	n/d	D	10	13	4

SAMPLE CODE	RIVER OR CONTROLLED WASTEWATER	LOCATION	ENROFLOXACIN (ng/l)		Spring 2019	Autumn 2019	Autumn 2020	Spring 2021
			Spring 2018	Autumn 2018				
1_ASE	Segre River	Torres de Segre	240	140	D	6	106	5
2_ASE	Noguera Ribagorzana River	Corbins	250	D	523	17	31	966
3_ASE	Clamor Amarga River	Zaidin	350	D	D	32	41	5
4_ASE	Cinca River	Fraga	380	D	D	5	28	2
5_ASE	Alcanadre River	Sariñena	n/d	D	n/d	n/d	11	2
6_ASE	Flumen River	Albalatillo	D	D	D	n/d	7	13
7_ASE	Gállego River	San Mateo de Gállego	1560	D	D	11	88	3
8_ASE	Arba de Riquel River	Ejea de los Caballeros	4390	D	D	314	107	4
9_ASE	Aragon Subordan River	Javierregay	240	n/d	n/d	n/d	8	2
10_ASE	Aragon River	Caparroso	280	D	D	n/d	15	3
11_ASE	Irantzu River	Estella	240	n/d	n/d	n/d	11	15
12_ASE	Arakil River	Irañeta	260	n/d	n/d	n/d	n/d	7
13_ASE	Queiles River	Novallas	250	D	D	2	n/d	2
14_ASE	Alhama River	Alfaro	350	D	n/d	3	18	7
15_ASE	Ega River	Estella	250	2920	n/d	n/d	n/d	9
16_ASE	Ega River	Estella	240	330	n/d	1,5	15	2
17_ASE	Arga River	Arazuri	590	210	D	n/d	4	3
18_ASE	Arga River	Ororbia	650	D	D	n/d	n/d	13
19_ASE	Ebro River	Fontellas	D	D	3033	n/d	42	11
20_ASE	Ebro River	Tudela	240	D	672	200	39	4
21_ASC	Bidasoa River	Bera	480	150	D	510	12	n/d
22_ASC	Bidasoa River	Bera	280	D	D	n/d	n/d	n/d
23_ASA/G	Adour River	Bayona	n/d	D	n/d	n/d	943	1
24_ASA/G	Gabas River	Poursiugues-Boucoue	n/d	n/d	D	n/d	2	2
25_ASA/G	Garonne River	Toulouse	n/d	180	n/d	n/d	1181	8
26_ASA/G	°	Le Castéra	n/d	150	n/d	n/d	290	2
27_ASA/G	Echez River	Maubourquet	n/d	n/d	n/d	16	n/d	1
28_ASA/G	Baïse River	Fontrailles	n/d	n/d	n/d	n/d	n/d	n/d

SAMPLE CODE	RIVER OR CONTROLLED WASTEWATER	LOCATION	TRIMETHOPRIM (ng/l)					
			Spring 2018	Autumn 2018	Spring 2019	Autumn 2019	Autumn 2020	Spring 2021
1_ASE	Segre River	Torres de Segre	n/d	D	D	n/d	138	12
2_ASE	Noguera Ribagorzana River	Corbins	n/d	n/d	D	30	246	106
3_ASE	Clamor Amarga River	Zaidín	D	n/d	D	n/d	153	4
4_ASE	Cinca River	Fraga	n/d	D	D	n/d	n/d	1
5_ASE	Alcanadre River	Sariñena	n/d	n/d	D	5	n/d	n/d
6_ASE	Flumen River	Albalatillo	D	n/d	D	n/d	n/d	1
7_ASE	Gállego River	San Mateo de Gállego	n/d	D	D	6	n/d	n/d
8_ASE	Arba de Riquel River	Ejea de los Caballeros	n/d	D	n/d	4	n/d	n/d
9_ASE	Aragon Subordan River	Javierregay	n/d	n/d	n/d	n/d	n/d	1
10_ASE	Aragon River	Caparroso	n/d	n/d	n/d	n/d	n/d	1
11_ASE	Irantzu River	Estella	n/d	D	D	n/d	n/d	1
12_ASE	Arakil River	Irañeta	n/d	D	n/d	n/d	n/d	6
13_ASE	Queiles River	Novallas	D	D	D	3	n/d	4
14_ASE	Alhama River	Alfaro	D	n/d	D	n/d	n/d	2
15_ASE	Ega River	Estella	D	n/d	n/d	n/d	n/d	1
16_ASE	Ega River	Estella	n/d	D	D	n/d	n/d	1
17_ASE	Arga River	Arazuri	n/d	D	D	n/d	n/d	1
18_ASE	Arga River	Ororbia	10	D	189		n/d	16
19_ASE	Ebro River	Fontellas	D	D	n/d	n/d	n/d	96
20_ASE	Ebro River	Tudela	n/d	D	n/d	4	n/d	23
21_ASC	Bidasoa River	Bera	n/d	D	n/d	n/d	n/d	3
22_ASC	Bidasoa River	Bera	n/d	D	n/d	n/d	n/d	1
23_ASA/G	Adour River	Bayona	n/d	n/d	n/d	3	n/d	n/d
24_ASA/G	Gabas River	Poursiugues-Boucoue	n/d	n/d	n/d	2	n/d	n/d
25_ASA/G	Garonne River	Toulouse	n/d	D	n/d	n/d	n/d	n/d
26_ASA/G	Save River	Le Castéra	n/d	D	n/d	n/d	n/d	1
27_ASA/G	Echez River	Maubourquet	D	D	n/d	n/d	n/d	n/d
28_ASA/G	Baise River	Fontrailles	n/d	D	n/d	n/d	n/d	n/d

SAMPLE CODE	RIVER OR CONTROLLED WASTEWATER	LOCATION	AZITHROMYCIN (ng/l)					
			Spring 2018	Autumn 2018	Spring 2019	Autumn 2019	Autumn 2020	Spring 2021
1_ASE	Segre River	Torres de Segre	n/d	n/d	D	n/d	22	2
2_ASE	Noguera Ribagorzana River	Corbins	n/d	n/d	n/d	n/d	n/d	4
3_ASE	Clamor Amarga River	Zaidin	n/d	n/d	n/d	n/d	n/d	4
4_ASE	Cinca River	Fraga	n/d	n/d	D	n/d	n/d	n/d
5_ASE	Alcanadre River	Sariñena	n/d	n/d	D	n/d	n/d	n/d
6_ASE	Flumen River	Albalatillo	n/d	n/d	D	n/d	n/d	1
7_ASE	Gállego River	San Mateo de Gállego	n/d	n/d	n/d	n/d	n/d	1
8_ASE	Arba de Riquel River	Ejea de los Caballeros	n/d	n/d	n/d	n/d	n/d	n/d
9_ASE	Aragon Subordan River	Javierregay	n/d	n/d	n/d	n/d	n/d	n/d
10_ASE	Aragon River	Caparroso	n/d	n/d	n/d	n/d	n/d	n/d
11_ASE	Irantzu River	Estella	n/d	n/d	D	n/d	n/d	1
12_ASE	Arakil River	Irañeta	n/d	n/d	n/d	n/d	n/d	n/d
13_ASE	Queiles River	Novallas	n/d	n/d	D	22	n/d	1
14_ASE	Alhama River	Alfaro	n/d	n/d	n/d	4	n/d	5
15_ASE	Ega River	Estella	n/d	n/d	n/d	3	n/d	1
16_ASE	Ega River	Estella	n/d	n/d	D	n/d	12	2
17_ASE	Arga River	Arazuri	n/d	n/d	n/d	n/d	n/d	1
18_ASE	Arga River	Ororbia	n/d	739	D	n/d	n/d	0
19_ASE	Ebro River	Fontellas	n/d	n/d	n/d	n/d	n/d	5
20_ASE	Ebro River	Tudela	n/d	n/d	n/d	n/d	n/d	1
21_ASC	Bidasoa River	Bera	n/d	n/d	D	n/d	n/d	n/d
22_ASC	Bidasoa River	Bera	n/d	n/d	n/d	n/d	n/d	n/d
23_ASA/G	Adour River	Bayona	n/d	n/d	n/d	n/d	n/d	n/d
24_ASA/G	Gabas River	Poursiugues-Boucoue	n/d	n/d	n/d	n/d	n/d	1
25_ASA/G	Garonne River	Toulouse	n/d	n/d	n/d	n/d	n/d	n/d
26_ASA/G	Save River	Le Castéra	n/d	n/d	n/d	n/d	n/d	1
27_ASA/G	Echez River	Maubourquet	n/d	n/d	n/d	3	n/d	1
28_ASA/G	Baise River	Fontrailles	n/d	n/d	n/d	n/d	n/d	n/d