

VIROBATHE

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WP7- Sampling location

Work Package 7 . Data on Barcelona metropolitan area



-The metropolitan area of Barcelona present 39.5 Km of coastline which comprises 23 bathing beaches visited for 7-8 million people each year.

Since 2003 all bathing beaches in Catalonia compiled European regulations.

-14 beaches (24 sampling points) are monitored each bathing season from June to middle September (17 times). Data on this monitoring is available at

http://mediambient.gencat.net/aca/ca//medi/aigües_litorals

The area is mostly affected by:

- Faecal pollution from 2 small rivers affected by secondary effluents from municipal wastewater treatment plants.**
- Faecal pollution from 3 wastewater treatment plants which present underwater outfalls (1,500m/16-19m depth-3,500m/55-60m depth).**
- Storm urban water runoff and sewer overflows or fortuitous spills of untreated wastewater which only occur accidentally.**

Work Package 7 . Data on sampling point

The sampling point is located south of Barcelona and is mainly affected by:

- **Faecal pollution from rivers Llobregat affected by secondary effluents from municipal wastewater treatment plants.**
- **Lagoon Murtra: Commonly closed and the water do not reach the sea, however previously to raining episodes part of the water that contains is bumped to the sea. The lagoon if it is a dry period may also contain water from the effluent of the wastewater treatment plant.**
- **Faecal pollution from 1 wastewater treatment plants through an underwater outfall wastewater 1,500m/16-19m . The plant treats the domestic and industrial wastewater from a population equivalent of 400,000 with a capability of 72,000 m³ per day.**
- **Storm urban water runoff and sewer overflows or fortuitous spills of untreated wastewater which only occur accidentally.**





Effluent of wastewater
treatment plant:

**Adenoviruses:
 10^3 - 10^4 GC/l**

River Llobregat:
 10^2 GC/l

Work Package 7 . Data on sampling point

Initial analysis of seawater in both sides of the peak (?) using two of the described methods and silica particle NA extraction techniques. The results were:

-Negative results for noroviruses

-Positive results by nested-PCR both in the 0 and -1 in the closest sampling point to the river using the procedure of the glass-wool columns. QPCR 592,78 GC/l

-Positive results for adenovirus by nested-PCR only at the 0 dilution in the second sampling point. QPCR 343.53GC/l.

