# Summary sheet for Tenacibaculum infections

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*in*

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# Summary sheet for *Tenacibaculum* infections

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## Aetiological agent/s

Infections induced by a group of species belonging to the genus *Tenacibaculum* including *T. maritimum, T. discolor, T. dicentrarchi, T. soleae, T. gallaïcum.* Co-infections often described.

## Epidemiology

Host/s (species; age): Most Mediterranean aquaculture species including seabass (*Dicentrarchux labrax*), seabream (*Sparus aurata*), Solea (*Solea senegalensis*), Mugilidae. Affect all stages of development with a higher incidence on juvenile stages from weaning to 100gr average.

Morbidity and mortality rates: depend on age, size class, rearing system and the *Tenacibaculum* species involved.

Acute form on fish from 0.5g to 100g: over 50% at weaning and early stages, up to 30% for fry in land based systems, 10 to 20% in pregrowing sea cage units.

Sub-acute form with low mortality rate on larger stages.

Transmission: horizontal transmission from fish to fish or from the environment, especially the biofilm.

Factors (environmental, others) for disease outbreak: Temperature dependent from 14°C to 19°C, higher salinity (>32ppt), low pH in RAS system, water quality parameters (organic load, low redox).

Predisposing zootechnical factors: mechanical lesions, skin parasitic infection, feeding behaviour/aggressivity, mucus erosion.

Co infection with bacterial skin infections: filamentous segmented bacteria, skin vibriosis.

## Clinical signs

Whitish to yellowish skin lesions with thick mucus affecting mainly the mouth, the caudal peduncle, or the dorsal fin and body side depending on *Tenacibaculum* species. Can evolve into ulcerative lesions by penetration into the muscular septa (*T. discolor*). Gill-focused necrosis with thick mucus.

## Samples to be collected for diagnostics

Scraping from the lesions either for direct microscopic observation or bacterial analysis.
Live fish with clinical symptoms to be sent alive to laboratory as bacteria are quite sensitive or swabs from the lesions with specific transport media.

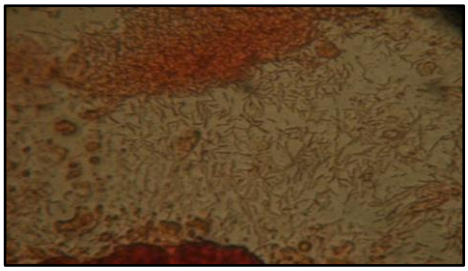
## Presumptive diagnostics analysis

Observation of the skin and/or gill typical lesions with thick whitish mucus.
Direct microscopic observation on fresh smears from scraping of the lesion or after staining (gram stain, MGG, methylene blue) (x400 or x1000 immersion).

## Confirmatory diagnosis analysis

Isolation and identification of the bacterial strain by mass spectrometry, RAPD-PCR, Sero-typing.

Skin necrosis with whitish mucus



Fresh smear from skin scrapping (400x)