

22th INTERNATIONAL SPECIALIZED COURSE
OPERATION AND CONTROL OF ACTIVATED SLUDGE
PROCESSES USING MICROBIOLOGICAL ANALYSIS
Perugia - Italy

FILAMENTOUS MICROORGANISMS IN ACTIVATED SLUDGE

Type 0914

OBSERVATION AT 1000x			UNDER PHASE CONTRAST OBSERVATION	
OBSERVATION AT 1000x	Sulfur Granules	In situ	- , +	
		S Test	-	
	Other Cell Inclusions			PHA
	Filament Diameter			1.0 - 1.2 µm
	Filament Length			50 - 200 µm
	Filament Shape			Straight
	Filament Location			Extends from floc surface, Free in liquid between the flocs
	Cell Septa clearly observed			+
	Indentations at Cell Septa			-
	Sheath			+
	Attached Growth			- , +
	Cell Shape and Size			Squares 1.0 x 1.0 µm
	Notes:			Sulfur granules, Square
	UNDER DIRECT ILLUMINATION			
Gram Stain			- , +	
Neisser Stain	Filament		-	
	Granules		- , +	

Phylogenetic
affiliation:

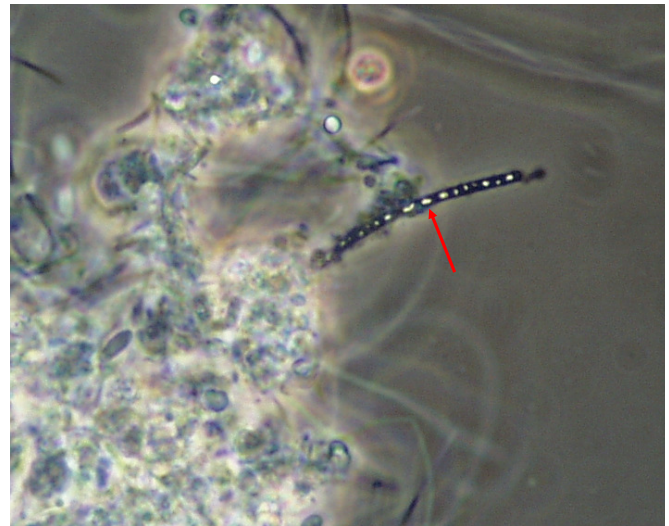
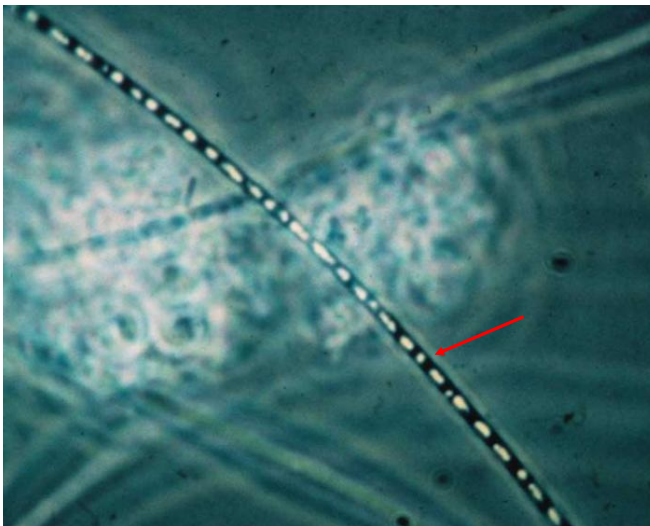
Chloroflexi

Causes:

- High rbCOD

Remedies:

- Anoxic, aerobic or anaerobic selectors
- Cl₂



Irregular sulfur granules