



**Water Quality** is critical for many industries – Fisheries, Hospitality, Healthcare, Agriculture, Manufacturing, Food and Beverages Processing.

CLL laboratories provides specialized solutions to meet regulatory requirements for these industries.

**Choksi Laboratories Ltd.**

For more information email [water@choksilab.com](mailto:water@choksilab.com)

**Water Analysis**





# Drinking Water Quality



*Drinking Water is one of the most critical of all human requirements.*

*CLL has developed a dedicated laboratory team for assessing Drinking Water Quality problems. This expert team is also a member of the technical committee of Bureau of Indian Standards for developing new analytical methodologies for water quality parameters.*

## Water Analysis

### Drinking Water Quality – Analytical Scans Available

- CLLDW01: Potable Drinking Water** as per **IS: 10500**  
(This package comes in three combinations - Comprehensive Scan, Corporate DW Scan, & Domestic DW Scan)
- CLLDW02: Drinking Water** as per **WHO, 2<sup>nd</sup> Edition**  
WHO 3<sup>rd</sup> Edition (Draft) guidelines are also available
- CLLDW03: Drinking Water** as per **EPA 816-F-02-013**, also called as National Primary Drinking Water Regulations, NPDWRs (EPA, US)  
Also available, National Secondary Drinking Water Regulations, For Nuisance Chemicals, NSDWRs (EPA, US)
- CLLDW04: Water intended for Human Consumption** as per European Council Directive: **EEC 98/83/EC**
- CLLDW05: Drinking Water – Emergency**, as per **A-A-20332B** (USDA)
- CLLDW06: Packaged Drinking Water** as per **IS: 14543** (See our Contract Offer)
- CLLDW07: Natural Mineral Water** as per **IS: 13428** (See our Contract Offer)
- CLLDW08: Bottled Water** as per **21 CFR 165.110** (USFDA)
- CLLDW09: Bottled Water** as per **IBWA** Model Code.  
(International Bottled Water Association)

Apart from the standard scans available above, CLL also provides troubleshooting solutions for many common drinking water problems. Please see our bulletin on "Water Quality Parameters" – CLL#W0104\_01.

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# Source Water Quality

# Water Analysis



*Industries have differing requirements for source water quality depending on their end-use. Accordingly, CLL provides analytical scans to match the various industry types. If your industry is not listed here, please contact us for more information.*

## Source Water Quality – Industry Specific Analytical Scans from CLL

- CLLSW01:** **Raw Water** for use in manufacture of Packaged Drinking Water as per **BIS Notification: STI/14543/2/2March2003** (See our Contract Offer)
- CLLSW02:** **Water for use in Food Processing, IS: 4251**
- CLLSW03:** Water for use in **Non-Alcoholic Beverages, IS: 12544**  
(This standard specifies three source water standards – IS: 10500, IS: 14543 Scan, & IS: 13428. Please define one of the three standards, in your test request form.)
- CLLSW04:** **Water for Storage Batteries, IS : 1069**
- CLLSW05:** **Water for use in Industries** (Generic Scan from CLL for industrial use. Client may provide their own specifications.)
- CLLSW06:** **Water for Irrigation** as per **CPCB** (Class E).
- CLLSW07:** **Reagent Grade Water, IS: 1070**
- CLLSW08:** **Reagent Grade Water, ASTM D1193-91**  
(This standard specifies four classes – 1, 2, 3 & 4; and three sub-types – A, B, & C. Example for Test Request for Reagent Grade Water as per ASTM – *Type 1 & A*, or, *Type 1 & B*, or, *Type 1 & C*)
- CLLSW09:** **Water for use in Concrete Mixtures, IS : 456**
- CLLSW10:** **Water for use in Fisheries, CPCB** (Class D)



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# Healthcare Water Quality



*Water for use in Hospitals, Pathology Labs, or Clinical Research Laboratories has to meet a certain minimum specification to prevent infections, or, false results due to contamination. Several bodies regulate this water quality, however the most recognized standards are those by CAP and NCCLS.*

# Water Analysis

## Source Water Quality – Industry Specific Analytical Scans

**CLLSW11: Water for Clinical Laboratory Studies**, as per National Committee for Clinical Laboratory Standards (NCCLS)

Type I : Test methods requiring minimal interference and maximum precision and accuracy, i.e. AA, Enzymatic procedures, Electro-phoretic procedures, high sensitivity chromatographic procedures, buffer solutions, preparation of standard solutions.

Type II : General laboratory testing other than above and glasswashing.

Type III : Glassware washing and feedwater for producing higher grade water.

**CLLSW12: Water for use in Pathology Lab**, as per guidelines of College of American Pathologists (CAP).

Type I: Tissue or cell culture, ultra-micro analysis, critical analytical procedures, standard preparations.

Type II: Most routine laboratory methods, immunology, haematology and other areas.

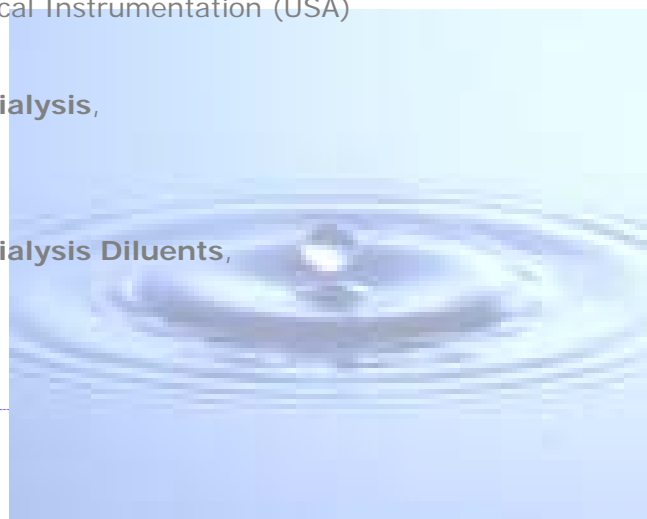
**CLLSW13: Water Quality Standards for Haemodialysis**, as per AAMI, The Association for the Advancement of Medical Instrumentation (USA)

**CLLSW14: Water Quality Standards for Haemodialysis**, as per **European Pharmacopoeia**

**CLLSW15: Water Quality Standards for Haemodialysis Diluents**, as per **British Pharmacopoeia**

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# Hospitality Industry Water Quality



*In the age of SARS and Bio-terrorism, the hospitality industry has a major role to play in assuring the safety of their guests. CLL offers some unique analytical solutions to address the quality concerns of water consumed by the hospitality industry.*

## Source Water Quality – Industry Specific Analytical Scans

### Source Water

CLLSW16: **Potable Drinking Water, IS: 10500** (Comprehensive Scan)

### Bathing Water

CLLSW17: **Water for Outdoors Bathing (Organized), CPCB** (Class B)

CLLSW18: **Bathing Water Quality**, based on EU Directive **76/160/EEC**

### Water for Swimming Pools

CLLSW19: **Water for Swimming Pools, IS : 3328**

For comprehensive water quality check, ask for **Pool Water Microbial scan** for Legionella & other infectious agents usually found in pool water.

CLLSW20: **Bathing, Recreational Waters** (Full Body Contact) as per **EPA** Bacterial Criteria (For unorganized freshwaters and marine waters)

### Water for Consumption

CLLSW21: **Water for Direct Consumption or Food Preparations (Raw or Semi-cooked)** - (Comprehensive Microbial Scan)

CLLSW22: Water for **Ice-Vending Machines and Coolers** (CLL's specific scan for storage water)

Also ask for special series of CLL's News Bulletins on Hospitality Industry, covering issues such as Food Safety, Bio-Burden Studies and Airline Catering Business.

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Water Analysis





# Waste-Water Quality



# Water Analysis

*Waste-water Analysis*

## Waste-Water Quality – Industry Specific Analytical Scans

- CLLWW01:* Hospital WasteWaters
- CLLWW02:* Metal Refining Wastewaters
- CLLWW03:* Food-Processing Wastewaters
- CLLWW04:* Sugar Processing Plants - Wastewater
- CLLWW05:* Alcohols / Breweries - Wastewater
- CLLWW06:* Tanneries - Wastewater
- CLLWW07:* CLL's Generic Industrial Waste-Water Scan
- CLLWW08:* Oil Refineries - Wastewaters

Apart from the standard scans available above, CLL also provides troubleshooting solutions for many common drinking water problems. Please see our bulletin on "Water Quality Parameters" – CLL#W0104\_01.

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# Pharmaceutical Water Quality

*Pharmaceutical Water Quality is an integral part of GMP. Water quality requirements differs with the process, medicinal products and their applications, in which it is to be used. CLL provides standardized water quality scans based on pharmacopoeial requirements as well as onsite validation services.*

# Water Analysis

## Pharmaceutical Quality – Analytical Scans available

	Sterile Purified Water	Purified Water	Sterile Water for Injections	Water for Injections	Distilled Water	Bacteriostatic Water for Injection	Highly Purified Water
IP		√	√	√	√		
BP		√ In Bulk & containers	√	√			√
USP	√	√	√	√		√	
EP		√		√			√

TGA, the Australian Health Authority has adopted European standard for Water.

Apart from the above, **Potable Water** is not covered under any specific monograph. However, all water must comply with the regulations laid down by the competent authority.

Competent Authority, depending on the plant's approval status can be WHO, USFDA, or DGH&S (India). CLL provides various standard analytical scans for Potable Water based on IS: 10500, WHO Guidelines, EPA Specifications and EU Guidelines. TGA recommends WHO guidelines for Potable Water.

CLL provides comprehensive quantitative data on pesticide residues and disinfectants & their by-products in water.

Call us for more information on water quality requirements.

See also, bulletin on "Water for Pharmaceutical Use"  
– CLL#W0104\_02.

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