



QUARTERLY REPORT BOTTLED WATER QUALITY

(October-December, 2018)



PAKISTAN COUNCIL OF RESEARCH IN WATER RESOURCES
Ministry of Science & Technology
Khyban-e-Johar, H-8/1, Islamabad.
www.pcrwr.gov.pk

October-December, 2018



SUMMARY

The poor quality of drinking water has forced a large cross-section of citizens to buy bottled water. However, many of the mineral water companies were found selling contaminated water. To monitor and improve the quality of bottled water, the government of Pakistan through Ministry of Science and Technology has designated the task for quarterly monitoring of bottled/mineral water brands to PCRWR. According to the monitoring report for the quarter October-December, 2018 following is the brief overview of the findings.

Quarterly Monitoring of Bottled/Mineral Water (October-December, 2018)

Item	No.	% age
Total No. of Brands Collected	78	-
Overall Safe Brands	72	92
Overall Unsafe Brands	06	08
Chemically Safe Brands	74	95
Chemically Unsafe Brands	04	05
Microbiologically Safe Brands	76	97
Microbiologically Unsafe Brands	02	03

Name of Targeted Cities	Islamabad, Karachi ,Multan, Lahore, Bahawalpur, TandoJam, Quetta.	
Unsafe Brands	KARAKORUM Flow	KARAKORUM Foods Pvt. Ltd. 21-km off Ferozepur Road Lahore www.karakorumfood.com
	Crystal Maya	A Product of Asghar and Sons
	ALPHA	Qaiser Enterprises Block B-261,N Nazimabad,Karachi
	Aqua Ayolam	A Project of Noor ul Ain Enterprises Karachi. 0343-3146186
	PARADISE	Paradise Foods Industry Paradise-food@outlook.com 0213-6369000, 0321-2036202
	Hibba	Manufactured by: HIBBA Water S.I.T.E Area Karachi. 0315-8561382



INTRODUCTION

Drinking water quality is deteriorating continually due to biological contamination from human waste, chemical pollutants from industries and agricultural inputs. Piped water also gets contaminated because pipes are laid very close to sewerage lines or open drains and cause many serious water borne diseases. It was found that 45% of infant deaths have been attributed to diarrhea and about 60% to overall infectious waterborne diseases in Pakistan. According to the World Health Organization (WHO) 25-30% of the diseases are gastro-intestinal in nature. The poor quality of drinking water has forced a large cross-section of citizens to buy bottled water. As a consequence of this expanding market a mushroom growth of bottled water industry in the country is witnessed during the last few years. However, many of the mineral water companies were found selling contaminated water. To monitor and improve the quality of bottled water, the government of Pakistan has designated the PCRWR as focal point agency.

1. Ministry of Science & Technology informed PCRWR Vide U.O. No. 5(21)/2004-ATA-II dated 17.10.2005 that the Cabinet in its meeting under the chairmanship of Prime Minister directed Ministry of Science & Technology to undertake regular survey/samples of bottled/mineral water and publicize the results on a quarterly basis and follow up with punitive/legal action.
2. Ministry of Science & Technology has assigned the task of quality monitoring of bottled water and publicize the results to PCRWR Vide U.O. No.1(1)/2005-Secy (MoST) dated 8.12.2005.

PCRWR SAMPLING METHODOLOGY

No. of Brands Collected	78	
No. of Cities Targeted	07 (Islamabad, Multan, Lahore, Bahawalpur, Quetta, Tando Jam, Karachi)	
Composition of Sampling Team as per MoU Signed between PCRWR & PSQA	One Research Officer and one Laboratory Assistants from PCRWR and Senior staff member and field officer from PSQA.	
Sampling Procedure	Samples of 78 commercially available brands of mineral/bottled water were collected from local market of 7 cities of Pakistan. These samples were collected by the senior staff members of National Water Quality Laboratory (NWQL) of PCRWR Head Office and Regional/district Water Quality Laboratories of PCRWR during October-December, 2018. A set of four bottles of each brand was collected and sealed on site. Identification codes were allotted to all the brands according to PCRWR Bottled Water Classification System.	
Transparency	Sample No. 1	Handed over to shopkeeper at the time of sample collection;
	Sample No. 2	Preserved in the National Water Quality Laboratory of PCRWR, Islamabad for future record.
	Sample No. 3	Used for Microbiological Analysis
	Sample No. 4	Used for Physico-chemical Analysis



PCRWR BOTTLED WATER CLASSIFICATION SYSTEM

Brand Name	PCRWR Code	City	Date of Collection	Date of Expiry	Size	Name & Address of Seller/Shop Keeper	Manufacturer's Address
Dasani	BWT-01	Quetta	14/11/2018	-	1.5 Liter	Gul General Store M.A Jinnah Road Quetta	Bottled Under Authority of The Coca Cola Company By Coca-Cola Beverages Pakistan Ltd.(CCBPL)26,FCC,Syed Maratab Ali Road, Gulberg IV, Lahore, Pakistan
Chen Water	BWT-02	Quetta	14/11/2018	-	1.5 Liter	S.Pharmacy& Surgical Store Jinnah Road Quetta	A Product of Chen Industries Pvt Ltd. 0303-7518466
Cool & Fresh	BWT-03	Quetta	14/11/2018	-	1.5 Liter	Khan Super Store BMC Quetta	A Product By:A.K Enterprises Sirki Road Quetta
Aqua Hygienic	BWT-04	Quetta	14/11/2018	-	1.5 Liter	M.General Store Samungli Road, Quetta	Marketed By Zauhras: Plot No.2,Street#12,Faisal Town Brewery Road Quetta.
Aquafina	BWT-05	Quetta	14/11/2018	-	1.5 Liter	Salam Medical Store M.A Jinnah Road, Quetta	Purified and Filled by Pakistan Beverages Ltd.Survey#212,Deh Konkar, District Malir, Karachi
Al-Hada	BWT-06	Quetta	14/11/2018	-	1.5 Liter	Bukhara Medical Store M.A Jinnah Road, Quetta	M/S Arhaaman Khan Companies main Shabo Chaman Housing Scheme Quetta.
Water Plus	BWT-07	Quetta	11/06/2018	-	1.5 Liter	Bukhara Medical Store M.A Jinnah Road, Quetta	Bottled By: Mega fine industries Plot# A-79,Industrial Area Malir Karachi
Nestle	BWT-08	Quetta	14/11/2018	-	1.5 Liter	Khan Super Store BMC Quetta	Bottled By Nestle Pakistan Ltd. 308-Upper Mall, Lahore
JEL	BWT-09	Quetta	14/11/2018	-	1.5 Liter	Rusk & Cake Saleem Plaza Shop No.Jinnah Road Quetta	Mega Fine Industries: Plot No. A-79, Malir Industrial Area Malir Karachi E-mail: info@megafineindustries.com
KARAKORUM Flow	BWT-10	Quetta	14/11/2018	-	1.5 Liter	Gul General Store M.A Jinnah Road Quetta	KARAKORUM Foods Pvt. Ltd. 21-km off Ferozepur Road Lahore www.karakorumfood.com 0312-2288887
NEO Max	BWT-11	Karachi	15/11/2018	12/2019	0.6 Liter	Al-Rehman General Store,Block-10,Gulistan-e-Johar,Karachi	Plot No.96, Malir Industrial Area Malir, Karachi. 021-35637773
Orion	BWT-12	Karachi	19/11/2018	-	0.6 Liter	Amarat Cold Drink and General Store, Malir Cantt No.06 Karachi	Madina Bottlers(Pvt)Ltd 0/3 Elahi Ware house Sector,7- A Korangi Industrial Area Karachi
Crystal Maya	BWT-13	Karachi	19/11/2018	-	0.6 Liter	Farhan Bakers main Market Model Colony Karachi	A Product of Asghar and Sons
Aqua Pure	BWT-14	Karachi	19/11/2018	-	0.6 Liter	Sherry Sweets Bakers Shah Faisal Colony No.1,Karachi	F-131,Bagh E Korangi.
D-Nova	BWT-15	Karachi	19/11/2018	-	0.6 Liter	Kamal Hotel Shah Faisal Colony No.03 Karachi	Jai Enterprises: Sindh Small Industries Larkana



Brand Name	PCRWR Code	City	Date of Collection	Date of Expiry	Size	Name & Address of Seller/Shop Keeper	Manufacturer's Address
Culligan	BWT-16	Karachi	19/11/2018	-	0.5 Liter	Zahoor Pan Shop and General Store, Malir Saudabad Karachi	Bottled By: Culligan Water of Pakistan, Johan (Pvt) Ltd.F-17/A, Hub River Road, S.I.T.E Karachi
Orish	BWT-17	Karachi	15/11/2018		0.6 Liter	Rajpoot Nagori Milk Shop, Abbas Town Sohrab Goth Karachi	B-24, KDA Society, Gulzar-e-hijri, Scheme 33, Karachi 0300-2890191
Hoor Water	BWT-18	Karachi	15/11/2018	-	0.6 Liter	Murad Ali Shah general Store Al-Abbas Town, Sohrab Goth Karachi	A Product of Hoor Water Pakistan: Plot No.126,Street-1,Block-1 Gulshan-e-Iqbal Karachi
ALPHA	BWT-19	Karachi	15/11/2018	-	0.6 Liter	Al-Madina Store, Akbar Town Sohrab Goth Karachi	Qaiser Enterprises Block N, B-261 Nazimabad,Karachi
Mag life	BWT-20	Karachi	15/11/2018	-	0.6 Liter	Jan Super Store,Block-10 Gulistan-e-Johar, Karachi	S-1,Ground Floor West Land Trade Centre,B-7-8,Shaheed-e-Millat Road, K.C.H.S Karachi
Douro	BWT-21	Karachi	15/11/2018	-	0.6 Liter	Sajid Khan, Main Super Highway Sohrab Goth, Karachi	Douro Enterprises: Plot No.C-14,Sultan Road, F.B Area Karachi
Aqua Ayolam	BWT-22	Karachi	15/11/2018	-	0.6 Liter	Al-Rehman General Store, Abdul Hassan Asfani Road, Karachi	A Project of Noor ul Ain Enterprises Karachi. 0343-3146186
Nafees	BWT-23	Karachi	15/11/2018	-	0.6 Liter	Al-Rehman General Store Abbass Market, Sohrab Goth, Karachi	Manufactured by: Nafees Pure Drinking Water Gulista-e-Jauhar Karachi 021-34019988
AFRA	BWT-24	Karachi	15/11/2018	12/2019	0.6 Liter	Imtiaz General Store, Karachi	Tower market, Hakeem Habib Road, Hyderabad, Karachi
Vitella	BWT-25	Karachi	19/11/2018	-	0.6 Liter	Etisham Abbasi Shop Quaida-abad Malir Karachi	YHY Enterprises: www.vitella.com 021-34314258 0305-2515995
Thanda Pani	BWT-26	Karachi	15/11/2018	-	0.6 Liter	New Quetta Al-Mair Hotel Sohrab Goth Karachi	Thanda Pani
PARADISE	BWT-27	Karachi	19/11/2018	-	1.5 Liter	Mr. Moosa Khan Shop, Near Quetta Darbahar Hotel at Al-Asif Bus Stop, Karachi	Paradise Foods Industry Paradise_food@outlook.com 0213-6369000 0321-2036202
Refresh(Hi Mark)	BWT-28	Karachi	15/11/2018	-	1.5 Liter	Saif-ul-Rehman Bakers Milk Shop Ab-ul-Hasan Asfani Road, Sohrab Goth, Karachi	Hi-mark International Marine Faisal P.E.C.H.S Karachi
Livon	BWT-29	Karachi	19/11/018	-	1.5 Liter	M.A general Store Gulistan-e-Johar Block-09,Karachi	A Product By: MURTAZA TRADERS: Suite 2, Khizaar Corner, R -143,Z -4,Gulshan - e - Maymar Karachi
Hydos	BWT-30	Karachi	19/11/018	12/2019	1.5 Liter	MashaAllah Bakery Drigh Road, Colony Karachi	Purified and Filled by S.S Consumer Product Karachi 4-A4/11 Nazimabad Karachi. Info.ssconsumer@gmail.com
Hibba	BWT-31	Karachi	15/11/2018	-	1.5 Liter	Gulshan General Store Sohrab Goth Karachi	Manufactured by: HIBBA Water S.I.T.E Area Karachi. 0315-8561382



Brand Name	PCRWR Code	City	Date of Collection	Date of Expiry	Size	Name & Address of Seller/Shop Keeper	Manufacturer's Address
Yes	BWT-32	Karachi	15/11/2018	12/2020	1.5 Liter	Al-Mustafa & GB Medical Store, Gulistan-e-Johar, Karachi	Mega Fina Industrial Area, Plot No.A-79, Malir Karachi
Aqua Mania	BWT-33	Karachi	15/11/2018	-	1.5 Liter	Fresh Milk Shop, Ab-ul-Hasan Asfani Road, Shorab Goth Karachi	A Product of Manialite Company: 92-36618158
Kpl	BWT-34	Karachi	15/11/2018	-	1.5 Liter	Subhan Ullah Nagori Milk Shop, Memon Market Karachi	Product of JDK Group of Company 0300-7008120 0315-3972395 Trade Mark 426868
Aura	BWT-35	TandoJam	19/11/2018	-	0.6 Liter	SSD General Store, Citizen Colony, Hyderabad.	A Product of AA Enterprises: Site Area Hyderabad. Tm#486668 0300-0335391
Viva	BWT-36	TandoJam	19/11/2018	-	0.6 Liter	Royal Bakers Main Road, Qasimabad	Quality Product Of Sarfraz Enterprises www.vivipk.com
Pearl	BWT-37	TandoJam	19/11/2018	-	1.5 Liter	Wahdat Kiryana and General Store, Wahdat Colony, Qasimabad	Address: 144/6.8 km, Near Toll Plaza Super Highway Jamshoro. www.prarmineralwater.com. Pk
Droplet	BWT-38	TandoJam	19/11/2018	-	1.5 Liter	Farman Medicos, Main Road Qasimabad	Bottled by: Makkah International: Block 1-A, Gulistan-e-Johar, Karachi. 021-34176815
DESERT DEW	BWT-39	Multan	26/11/2018		0.6 Liter	A-One Mart Shuraj Miani Road, Multan	Bottled by: Maxwell International: Wada Bagh beside Sakhi Sultan Darbar Suraj Miani Road, Multan
Zam	BWT-40	Multan	28/11/2018		0.6 Liter	Collected from manufacturing point	Bottled By: New MHN Drinks & Food Makers (Pvt) Ltd 126-130, Sabzwari Town Multan, Pakistan mnh.drinks@gmail.com
Pura Light	BWT-41	Multan	27/11/2018		0.6 Liter	Collected from manufacturing point	Manufactured by: Al-Haseeb Foods Puralight41@gmail.com 0324-6122250
RO Plant pk	BWT-42	Multan	28/11/2018		0.5 Liter	Bilal Medical Store Zakriya Town Multan	Shop#7, Sanpaal Market, Near Thana Bahaudin Zakriya, Shalimar Colony, Multan 0315-6056111
FAIHA AQUA	BWT-43	Multan	26/11/2018		1.5 Liter	Collected from manufacturing point	Bottled by FAIHA Enterprises Multan, Green Road, Kekar Sultan Pur Multan.
Alfalah Mineral Water	BWT-44	Multan	28/11/2018		1.5 Liter	Collected from manufacturing point	Bottled at Source in Pakistan Western Fort Commercial Area, Qasim Bela Multan Cantt. wateralfalah@gmail.com
Fresco Health Water	BWT-45	Multan	27/11/2018		1.5 Liter	Collected from manufacturing point	Makdoom Pur Chungi Kabirwala. PS:221-2010(R)
PIYAAS Plus	BWT-46	Bahawalpur	05/12/2018	-	1.5 Liter	Collected from manufacturing point	Mouza Zakira Samma Satta. Head Off: 59-A, Ghalla Mandi, Bahawalpur, Pakistan



Brand Name	PCRWR Code	City	Date of Collection	Date of Expiry	Size	Name & Address of Seller/Shop Keeper	Manufacturer's Address
Barclay	BWT-47	Bahawalpur	29/11/2018		0.5 Liter	Collected from manufacturing point	Product by MM & Co. Punjab Small Industries Bahawalpur 0303-8780292
7 Blue	BWT-48	Bahawalpur	29/11/2018	08/2019	0.5 Liter	Shareef Pharmacy M/T-C Bahawalpur	Serani Foods & Beverages Company: Khanqah Sharif Bahawalpur Pakistan. 0300-7053898
Elayn Plus	BWT-49	Bahawalpur	05/12/2018	06/2019	0.6 Liter	Collected from manufacturing point	A Product Of Sajjid Food Industrey Shadab Colony (Hamaytian) Bahawalpur.
Water Candy	BWT-50	Bahawalpur	29/11/2018	10/2019	0.5 Liter	Pharmacy 1 Gulberg Road M/T-A Bahawalpur	Diwan Enterprises: Tehsil Ahmedpur, Distt. Bahawalpur watercandy@diwanenterprises.com
National	BWT-51	Bahawalpur	29/11/2018	11/2019	0.5 Liter	New Awan Medical Store M/T-C Bahawalpur	Nazir Enterprises Dera Bakha Bahawalpur Nazirenterprises509@gmail.com
Oxygen+	BWT-52	Islamabad	26/12/2018	12/2019	1.5 Liter	Collected from manufacturing point	Registered Trade Mark of Care Enterprises; Address: Plot#86, St#10 Sector I-9/2 Islamabad.
Venora	BWT-53	Islamabad	26/12/2018	06/2019	19 Liter	Collected from manufacturing point	Plot No.238, St#8, I-9/3 Islamabad 051-4432848
Elim	BWT-54	Islamabad	26/12/2018	06/2019	19 Liter	Collected from manufacturing point	Plot No.195, Sector I-9/2, Islamabad 051-4442338
Himalaya	BWT-55	Islamabad	26/12/2018	12/2019	1.5 Liter	Collected from manufacturing point	Khawaja Foods: Plot No.276, Street No.1, I-9/3, Islamabad
Deosai	BWT-56	Islamabad	26/12/2018	12/2019	6 Liter	Collected from manufacturing point	Bottled By: Margalla Foods & Beverages Plot No.32, Khyaban-e-Johar Industrial Area, Sector 1-9/2, Islamabad
HAYAT	BWT-57	Islamabad	26/12/2018	06/2019	1.5 Liter	Collected from manufacturing point	A Product of PakTurk Bottlers: 1-10/3 Street No.9, Plot No.140, Islamabad www.pakturkbottlers.com
AQUAX	BWT-58	Islamabad	26/12/2018	06/2019	1.5 Liter	Collected from manufacturing point	A Product of PakTurk Bottlers: 1-10/3 Street No.9, Plot No.140, Islamabad www.pakturkbottlers.com
Al-Saudia (Water Pack)	BWT-59	Islamabad	26/12/2018	12/2019	0.5 Liter	Collected from manufacturing point	Process & Bottled By: Al-Saudia Foods Lehtar, Road Islamabad
Calci Dew	BWT-60	Islamabad	26/12/2018	12/2019	19 Liter	Collected from manufacturing point	Plot 3 Main Sohan Stop Expressway Islamabad, Pakistan
Maple Plus	BWT-61	Islamabad	26/12/2018	06/2019	1.5 Liter	Collected from manufacturing point	Maple Plus Purification Plant Plot No.2, Federal Area, Sohan Islamabad.
Aquantis	BWT-62	Islamabad	26/12/2018	12/2019	1.5 Liter	Collected from manufacturing point	Quality Providers: Bismillah Plaza Ashraf Town Pindorian Khanapul Islamabad
Sea Pack	BWT-63	Islamabad	26/12/2018	-	1.5 Liter	Collected from manufacturing point	Kiyani Plaza Ashraf Town Pindorian, Islamabad Email: info.seapack@gmail.com
Softin	BWT-64	Islamabad	26/12/2018	12/2019	1.5 Liter	Collected from manufacturing point	Manufactured by: SOFTIN PURE WATER Pindorian Islamabad



Brand Name	PCRWR Code	City	Date of Collection	Date of Expiry	Size	Name & Address of Seller/Shop Keeper	Manufacturer's Address
Fresh Drop	BWT-65	Islamabad	26/12/2018	03/2019	6 Liter	Collected from manufacturing point	Ghori Town Service Road, Khanna East Islamabad freshdroppk@gmail.com
Hydr8	BWT-66	Islamabad	26/12/2018	10/2019	6 Liter	Collected from manufacturing point	T-7, Sardar Arcade 2, G-11 Markaz, Islamabad Hydr8@live.com
Water Mart	BWT-67	Lahore	27/12/2018	12/2019	0.5 Liter	Collected from manufacturing point	Water Mart (Pvt) Ltd 94-E, PGECHS II, College Road, Lahore www.watermartpk.com
Pure Fine	BWT-68	Lahore	27/12/2018	10/2019	0.6 Liter	Collected from manufacturing point	Manufactured and Bottled by: PURAFINE Mineral water Plant, 23-Iqbal Street, Opp. Saidpur Grid Station, Multan Road, Lahore
Sprova	BWT-69	Lahore	31/12/2018	07/2019	0.6 Liter	Sprova Water Shoukat Khanam Road Lahore.	Shoukat Khanam Chowk, Opp UCP, Lahore www.sprova.pk
Aqua Safe	BWT-70	Lahore	31/12/2018	-	0.6 Liter	Butt Sweets & Bakers G-Block Johar Town Lahore.	Deep Well Source at and Bottled by: Aqua Safe Pakistan 96-McLeod Road, Lahore
Gourmet	BWT-71	Lahore	31/12/2018	-	0.6 Liter	Gourmet bakery G-Block Johar Town Lahore.	Gourmet Foods: Gate # 1, Plot 1-5, Sunder Industrial Estate, Raiwind Sunder Road, Lahore, Pakistan
Jami Water	BWT-72	Lahore	27/12/2018	10/2019	0.6 Liter	Collected from manufacturing point	A Product of Jami Water Services: 356-E PIA Housing Society PIA Road, Lahore www.jamiwater.com
Dasani	BWT-73	Lahore	31/12/2018	11/2019	0.5 Liter	Metro Store Thokar Niaz Baig Lahore.	Bottled Under Authority of The Coca Cola Company By Coca-Cola Beverages Pakistan Ltd. (CCBPL) 26, FCC, Syed Maratab Ali Road, Gulberg IV, Lahore, Pakistan
ZAMS	BWT-74	Lahore	27/12/2018	08/2019	0.6 Liter	Collected from manufacturing point	Zams Global Enterprises Pvt Ltd. Shop No.4, Block-A, Commercial Market Plaza PECHS Valancia Town Lahore
Rahat	BWT-75	Lahore	31/12/2018	-	0.6 Liter	Rahat Bakers Wapda Town Lahore.	Rahat Bakers & Departmental Stores Rahat Market, Aziz Bhatti Shaheed Road, Lahore Cantt
Pure It	BWT-76	Lahore	31/12/2018	12/2019	1.5 Liter	Collected from manufacturing point	Pure it foods & Beverages: Ghausia Street, Sher Shah Road Off Raiwind Road Lahore.
Aqua One	BWT-77	Lahore	27/12/2018	09/2018	1.5 Liter	Collected from manufacturing point	Aqua One Filtration (Pvt) Ltd 30-C, Naz Town Main Boulevard Lahore. www.aquaonefiltration.com
ATLANTIS	BWT-78	Islamabad	27/12/2018	12/2019	19 Liter	HBL Tower Blue Area Islamabad.	Office & Factory: Plot # 615 -616, Service Road, Fazaia Colony Near TCS Office Khana Rawalpindi



WATER QUALITY PARAMETERS AND METHODS USED FOR ANALYSIS

Sr. #	PARAMETERS	ANALYTICAL METHOD
1.	Alkalinity (mg/l as CaCO ₃)	2320, Standard method (2012) APHA
2.	Arsenic (ppb)	AAS Vario 6, Analytik Jena AG
3.	Bicarbonate	2320, Standard method (2012) APHA
4.	Calcium (mg/l)	3500-Ca-D, Standard Method (2012) APHA
5.	Carbonate (mg/l)	2320, Standard method (2012)
6.	Chloride (mg/l)	Titration (Silver Nitrate), Standard Method (2012) APHA
7.	Color (TCU)	Sensory Test
8.	Conductivity (μS/cm)	E.C meter, Hach-44600-00, USA
9.	Hardness (mg/l)	EDTA Titration, Standard Method (2012) APHA
10.	Magnesium (mg/l)	2340-C, Standard Method (2012) APHA
11.	Nitrate Nitrogen (mg/l)	Cd. Reduction (Hach-8171) by Spectrophotometer
12.	Odor	Sensory Test
13.	pH	pH Meter, Hanna Instrument, Model 8519, Italy
14.	Potassium (mg/l)	Flame photometer PFP7, UK
15.	Sodium (mg/l)	Flame photometer PFP7, UK
16.	Sulfate (mg/l)	SulfaVer4 (Hach-8051) by Spectrophotometer
17.	Phosphate (mg/l)	8190 and 8048 (Hach)
18.	Taste	Sensory Test
19.	TDS (mg/l)	2540C, Standard method (2012) APHA
20.	Turbidity (NTU)	Turbidity Meter, Lamotte, Model 2008, USA
21.	Fluoride (mg/l)	4500-F C. ion-Selective Electrode Method Standard method (2005) APHA
22.	Iron (mg/l)	FerroVer method (HACH Cat. 21057-69)
23.	Total Coliforms(MPN/100ml)	9221-B,C&D, Standard Methods (2012) APHA
24.	E. coli (MPN/100ml)	9221-B,C&D, Standard Methods (2012) APHA



WATER QUALITY PERMISSIBLE LIMITS FOR BOTTLED WATER

Sr. #	Parameter	Units	Permissible Limits		
			WHO	IBWA	PSQCA
1.	Alkalinity	(mg/l)	NGVS	NGVS	NGVS
2.	Bicarbonate	(mg/l)	NGVS	NGVS	NGVS
3.	Calcium	(mg/l)	NGVS	NGVS	100
4.	Carbonate	(mg/l)	NGVS	NGVS	NGVS
5.	Chloride	(mg/l)	250	250	250
6.	Color	(TCU)	15	NGVS	5
7.	Conductivity	(μ S/cm)	NGVS	NGVS	NGVS
8.	Fluoride	(mg/l)	1.5	3	0.7
9.	Hardness	(mg/l)	NGVS	NGVS	NGVS
10.	Iron	(mg/l)	0.3	0.3	0.3
11.	Magnesium	(mg/l)	NGVS	NGVS	50
12.	Odor	-	Odorless	NGVS	Unobjectionable
13.	Nitrate-N	(mg/l)	10	10	10
14.	pH	-	6.5-8.5	NGVS	6.5-8.5
15.	Potassium	(mg/l)	NGVS	NGVS	10
16.	Sodium	(mg/l)	200	NGVS	50
17.	Sulfate	(mg/l)	250	250	250
18.	Taste	-	Unobject.	NGVS	Unobjectionable
19.	TDS	(mg/l)	1000	500	500
20.	Turbidity	(NTU)	5	NGVS	0.5
21.	Phosphate	(mg/l)	NGVS	NGVS	NGVS
22.	Arsenic	Ppb	10	10	10
23.	Total Coliforms	MPN/100ml	0	0	0
24.	E-Coli	MPN/100ml	0	0	0

WHO World Health Organization
IBWA International Bottled Water Association
PSQCA Pakistan Standards and Quality Control Authority



SUMMARY OF RESULTS OF PCRWR MONITORING

Contaminants of Potential Concerns Found in Bottled Water Brands

Sodium: Safe Limit : 50 parts per million (ppm)					
Sr. No	Brand Name	Code	City of Manufacturing	Unit	Results
1.	Crystal Maya	BWT-13		ppm	78
2.	ALPHA	BWT-19	Karachi	ppm	82
3.	PARADISE	BWT-27	Karachi	ppm	78

pH : Safe Limit : 6.5-8.5					
Sr. No	Brand Name	Code	City of Manufacturing	Unit	Results
1.	Hibba	BWT-31	Karachi	-	5.56

Bacteriological: (Total Coliforms , Fecal Coliforms & E Coli) (Safe Limit: 0/100ml)					
Sr. No	Brand Name	Code	City of Manufacturing	Results	
				Total Coliforms (MPN/100ml)	E. Coli (MPN/100ml)
1.	KARAKORUM Flow	BWT-10	Lahore	04	Nil
2.	Aqua Ayolam	BWT-22	Karachi	06	Nil

PCRWR TESTING: SAFE BRANDS

Sr. No	Brand Name	Code	Quality (Safe/Unsafe)	
			Chemical	Microbiological
1.	Dasani	BWT-01	Safe	Safe
2.	Chen Water	BWT-02	Safe	Safe
3.	Cool & Fresh	BWT-03	Safe	Safe
4.	Aqua Hygienic	BWT-04	Safe	Safe
5.	Aquafina	BWT-05	Safe	Safe
6.	Al-Hada	BWT-06	Safe	Safe
7.	Water Plus	BWT-07	Safe	Safe
8.	Nestle	BWT-08	Safe	Safe
9.	JEL	BWT-09	Safe	Safe
10.	NEO Max	BWT-11	Safe	Safe
11.	Orion	BWT-12	Safe	Safe
12.	Aqua Pure	BWT-14	Safe	Safe
13.	D-Nova	BWT-15	Safe	Safe
14.	Culligan	BWT-16	Safe	Safe
15.	Orish	BWT-17	Safe	Safe
16.	Hoor Water	BWT-18	Safe	Safe



Sr. No	Brand Name	Code	Quality (Safe/Unsafe)	
			Chemical	Microbiological
17.	Mag life	BWT-20	Safe	Safe
18.	Douro	BWT-21	Safe	Safe
19.	Nafees	BWT-23	Safe	Safe
20.	AFRA	BWT-24	Safe	Safe
21.	Vitella	BWT-25	Safe	Safe
22.	Thanda Pani	BWT-26	Safe	Safe
23.	Refresh(Hi Mark)	BWT-28	Safe	Safe
24.	Livon	BWT-29	Safe	Safe
25.	Hydos	BWT-30	Safe	Safe
26.	Yes	BWT-32	Safe	Safe
27.	Aqua Mania	BWT-33	Safe	Safe
28.	Kpl	BWT-34	Safe	Safe
29.	Aura	BWT-35	Safe	Safe
30.	Viva	BWT-36	Safe	Safe
31.	Pearl	BWT-37	Safe	Safe
32.	Droplet	BWT-38	Safe	Safe
33.	DESERT DEW	BWT-39	Safe	Safe
34.	Zam	BWT-40	Safe	Safe
35.	Pura Light	BWT-41	Safe	Safe
36.	RO Plant pk	BWT-42	Safe	Safe
37.	FAIHA AQUA	BWT-43	Safe	Safe
38.	Alfalah	BWT-44	Safe	Safe
39.	Fresco	BWT-45	Safe	Safe
40.	PIYAAS	BWT-46	Safe	Safe
41.	Barclay	BWT-47	Safe	Safe
42.	7 Blue	BWT-48	Safe	Safe
43.	Elayn Plus	BWT-49	Safe	Safe
44.	Water Candy	BWT-50	Safe	Safe
45.	National	BWT-51	Safe	Safe
46.	Oxygen+	BWT-52	Safe	Safe
47.	Venora	BWT-53	Safe	Safe
48.	Elim	BWT-54	Safe	Safe
49.	Himalaya	BWT-55	Safe	Safe
50.	Deosai	BWT-56	Safe	Safe
51.	HAYAT	BWT-57	Safe	Safe
52.	AQUAX	BWT-58	Safe	Safe
53.	Al-Saudia (Water Pack)	BWT-59	Safe	Safe
54.	Calci Dew	BWT-60	Safe	Safe
55.	Maple Plus	BWT-61	Safe	Safe
56.	Aquantis	BWT-62	Safe	Safe
57.	Sea Pack	BWT-63	Safe	Safe
58.	Softin	BWT-64	Safe	Safe
59.	Fresh Drop	BWT-65	Safe	Safe
60.	Hydr8	BWT-66	Safe	Safe
61.	Water Mart	BWT-67	Safe	Safe
62.	Pure Fine	BWT-68	Safe	Safe
63.	Sprova	BWT-69	Safe	Safe
64.	Aqua Safe	BWT-70	Safe	Safe
65.	Gourmet	BWT-71	Safe	Safe



Sr. No	Brand Name	Code	Quality (Safe/Unsafe)	
			Chemical	Microbiological
66.	Jami Water	BWT-72	Safe	Safe
67.	Dasani	BWT-73	Safe	Safe
68.	ZAMS	BWT-74	Safe	Safe
69.	Rahat	BWT-75	Safe	Safe
70.	Pure It	BWT-76	Safe	Safe
71.	Aqua One	BWT-77	Safe	Safe
72.	ATLANTIS	BWT-78	Safe	Safe

PCRWR TESTING: UNSAFE BRANDS

Sr. No	Brand Name	Code	Address/Manufacturer	Quality (Safe/Unsafe)	
				Chemical	Microbiological
1.	KARAKORUM Flow	BWT-10	KARAKORUM Foods Pvt. Ltd. 21-km off Ferozepur Road Lahore www.karakorumfood.com	Safe	Unsafe
2.	Crystal Maya	BWT-13	A Product of Asghar and Sons	Unsafe	Safe
3.	ALPHA	BWT-19	Qaiser Enterprises Block B-261,N Nazimabad,Karachi	Unsafe	Safe
4.	Aqua Ayolam	BWT-22	A Project of Noor ul Ain Enterprises Karachi. 0343-3146186	Safe	Unsafe
5.	PARADISE	BWT-27	Paradise Foods Industry Paradise-food@outlook.com 0213-6369000, 0321-2036202	Unsafe	Safe
6.	Hibba	BWT-31	Manufactured by: HIBBA Water S.I.T.E Area Karachi. 0315-8561382	Unsafe	Safe

MARKET CONSISTENCY IN TWO NEIGHBORING QUARTERS

Sr. No	Consistent Brands	New Brands	Unavailable Brands
1.	Dasani	Chen Water	Blue Spring Water
2.	Aqua Hygienic	Cool & fresh	Nectar
3.	Aquafina	Al-Hada	Fresh Life
4.	Water Plus	Orion	Pura Water
5.	Nestle	Aqua Pura	Murree Sparkletts
6.	JEL	Culligan	Nestol
7.	KARAKORUM flow	Orish	Mehr
8.	NEO Max	Hoor Water	Springley
9.	Crystal Maya	ALPHA	Prime Water
10.	D-Nova	Aqua Ayolam	Sunley Pure
11.	Mag Life	Nafees	Hydra
12.	Douro	AFRA	Eden Pure water
13.	Vitella	Thanda Pani	SN Pure Drinking Water
14.	Livon	PARADISE	Galaxy Pur Water
15.	Yes	Refresh(Hi mark)	Pureau water
16.	Viva	Hydos	New Deep
17.	Zam	Hibba	Pure Next
18.	Pura Light	Aqua Mania	Kristil Aquas



Sr. No	Consistent Brands	New Brands	Unavailable Brands
19.	Piyaas Plus	Kpl	Panee
20.	7 Blue	Aura	Water Well
21.	Elyan Plus	Pearl	Kinley
22.	Water Candy	Droplet	Pine'o
23.	National	Desert Dew	J.Smart Water
24.	Venora	RO Plant pk	OSLO
25.	Deosai	FAIHA Aqua	Fit Fat
26.	Aquantis	Alfalah Mineral Water	Aqua stream
27.	Sea Pack	Fresco	3 Star
28.	Hydr8	Barclay	Mai Dubai
29.	Gourmet	Oxygen+	Marina
30.	Jami Water	Elim	Ab-e-Khyber
31.	Aqua One	Himalaya	Nebraska
32.		Hayat	Top Up
33.		AQUAX	Natural Aqwah
34.		Al-Saudia(Water Pack)	Aquatic Fresh
35.		Calci Dew	Moya Mineral Water
36.		Maple Plus	Wah Water
37.		Softin	Aqua Splash
38.		Fresh Drop	Sky Blue
39.		Water Mart	Jallundhar
40.		Pura Fine	Aqua Crystal
41.		Sprova	Pani
42.		Aqua Safe	Falah
43.		Rahat	Aqua Cool
44.		Pure It	Aab-e-Noor
45.		ATLANTIS	New Aqua
46.			Al-Masafi
47.			New Max
48.			Real Plus
49.			Safe Way
50.			Pure 18
51.			Al-Habib
52.			Pura Aqua
53.			Defence
54.			Aquench
55.			MOGUL
56.			Splash Pure Water
57.			My Sweet Water
58.			Unique
59.			My Smart Water
60.			AS Pure Water
61.			Abaan Water
62.			Good Water
63.			Aqua Das
64.			Klinz Water
65.			Glacial
66.			Anhaar
67.			Aqua Saad
68.			Cristalene
69.			Doce



DISEASE POTENTIAL FROM CONTAMINATED BOTTLED WATER

Sr. No	Contaminant	Diseases Impacts
1.	Bacteriological Contamination	Cholera, Diarrhea, Dysentery, Hepatitis, Typhoid
2.	Sodium	Hypertension
3.	pH	Acidity due to low pH

CONCLUSIONS

Sr. No	Item	Conclusion	
		No.	% age
1.	Total No. of Brands Collected	78	-
2.	Overall Safe Brands	72	92
3.	No. of Overall Unsafe Brands	06	08
4.	No. of Chemically Safe Brands	74	95
5.	No. of Chemically Unsafe Brands	04	05
6.	No. of Microbiologically Safe Brands	76	97
7.	No. of Microbiologically Unsafe Brands	02	03
8.	No. of Consistent Brands in Market	31	41
9.	No. of Brands Disappeared/Unavailable	69	88
10.	No. of New Brands	45	59

Detailed water quality status of each bottled water brand is available at **Annexure-1**



Annexure-1

Chemical and Microbiological Quality of Bottled/Mineral Water Brands

Brand Name	Brand Code	Turbidity	pH	EC	TDS	Ca	Mg	Hard	HCO ₃	Cl	Na	F	Fe	K	NO ₃	SO ₄	As	* Microbiological Contaminants	
PSQCA Bottled Water Standards	-	0.5	6.5 - 8.5	NGVS	500	100	50	NGVS	NGVS	250	50	0.7	0.3	10	10	250	10	Total Coli forms 0/100ml	E-Coli 0/100ml
Detection Limits	-	0.2	0.02	0.287	-	2	1	5	5	2	1	0.03	0.03	0.2	0.06	0.4	0.1	-	-
Units	-	NTU		μS/cm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	MPN /100ml	MPN /100ml
Dasani	BWT-01	BDL	7.13	260	143	12	17	100	68	BDL	12	0.16	BDL	1.0	BDL	55	BDL	Negative	Negative
Chen Water	BWT-02	BDL	7.34	258	142	12	17	100	40	50	11	0.10	BDL	7.5	BDL	24	0.4	Negative	Negative
Cool & Fresh	BWT-03	BDL	6.70	325	179	36	11	135	10	95	7	0.30	BDL	1.2	0.5	03	0.5	Negative	Negative
Aqua Hygienic	BWT-04	BDL	7.31	434	239	40	19	180	60	82	20	BDL	BDL	0.8	BDL	40	0.5	Negative	Negative
Aquafina	BWT-05	BDL	6.82	230	127	20	06	74	20	36	16	BDL	BDL	1.5	BDL	39	BDL	Negative	Negative
Al-Hada	BWT-06	BDL	7.10	333	183	20	16	115	60	65	23	0.13	BDL	1.0	1.0	15	BDL	Negative	Negative
Water Plus	BWT-07	BDL	6.65	225	124	12	10	70	30	42	18	0.03	BDL	0.8	0.8	20	0.3	Negative	Negative
Nestle	BWT-08	BDL	7.60	404	222	40	15	160	60	80	20	BDL	BDL	0.6	BDL	29	BDL	Negative	Negative
JEL	BWT-09	BDL	6.55	200	110	08	07	50	30	38	23	BDL	BDL	0.8	0.8	16	0.3	Negative	Negative
KARAKORUM Flow	BWT-10	BDL	6.80	180	99	16	05	60	40	24	15	BDL	BDL	0.6	BDL	16	BDL	04	Negative
NEO Max	BWT-11	BDL	7.01	315	173	20	10	90	40	60	30	0.02	BDL	1.0	2.7	21	0.3	Negative	Negative
Orion	BWT-12	BDL	7.00	357	196	36	7	120	40	72	26	0.07	BDL	1.2	0.5	32	0.3	Negative	Negative
Crystal Maya	BWT-13	BDL	7.08	463	255	4	10	50	50	96	78	0.05	BDL	1.2	2.8	26	0.4	Negative	Negative
Aqua Pure	BWT-14	BDL	6.50	365	201	32	12	130	40	82	23	0.05	BDL	1.0	0.8	20	0.2	Negative	Negative
D-Nova	BWT-15	BDL	7.37	457	251	40	17	170	60	85	26	0.30	BDL	1.7	BDL	42	BDL	Negative	Negative
Culligan	BWT-16	BDL	7.07	281	155	20	15	110	40	70	9	BDL	BDL	8.2	BDL	BDL	BDL	Negative	Negative
Orish	BWT-17	BDL	7.10	350	193	40	07	130	45	72	21	0.06	BDL	0.9	BDL	28	BDL	Negative	Negative

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



Brand Name	Brand Code	Turbi dity	pH	EC	TDS	Ca	Mg	Hard	HCO ₃	Cl	Na	F	Fe	K	NO ₃	SO ₄	As	* Microbiological Contaminants	
																		Total Coli forms 0/100ml	E-Coli 0/100ml
PSQCA Bottled Water Standards	-	0.5	6.5 - 8.5	NGV S	500	100	50	NGVS	NGV S	250	50	0.7	0.3	10	10	250	10	Total Coli forms 0/100ml	E-Coli 0/100ml
Detection Limits	-	0.2	0.02	0.287	-	2	1	5	5	2	1	0.03	0.03	0.2	0.06	0.4	0.1	-	-
Hoor Water	BWT-18	BDL	6.93	353	194	28	13	125	50	74	23	0.08	BDL	2.8	BDL	24	BDL	Negative	Negative
ALPHA	BWT-19	BDL	7.00	570	314	8	19	100	70	120	82	0.32	BDL	2.5	BDL	40	BDL	Negative	Negative
Mag life	BWT-20	BDL	7.05	306	168	24	12	110	40	60	19	0.03	BDL	1.7	BDL	30	0.6	Negative	Negative
Douro	BWT-21	BDL	6.78	322	177	24	12	110	45	60	22	0.13	BDL	0.9	0.5	31	0.4	Negative	Negative
Aqua Ayolam	BWT-22	BDL	6.66	342	188	20	17	120	40	70	23	BDL	BDL	1.2	0.2	32	BDL	06	Negative
Nafees	BWT-23	BDL	7.05	339	186	18	17	115	40	72	24	0.05	BDL	0.8	BDL	28	BDL	Negative	Negative
AFRA	BWT-24	BDL	6.75	342	188	22	16	120	38	72	24	0.05	BDL	1.1	BDL	33	0.2	Negative	Negative
Vitella	BWT-25	BDL	6.94	327	180	20	15	110	40	72	23	0.17	BDL	2.3	BDL	19	0.3	Negative	Negative
Thanda Pani	BWT-26	BDL	6.70	360	198	40	07	130	50	70	22	0.17	BDL	1.1	0.6	30	BDL	Negative	Negative
PARADISE	BWT-27	BDL	7.06	445	245	04	10	50	60	76	78	0.34	BDL	1.2	4.2	36	BDL	Negative	Negative
Refresh(Hi Mark)	BWT-28	BDL	6.70	382	210	40	10	140	60	72	23	0.01	BDL	1.1	0.2	32	0.2	Negative	Negative
Livon	BWT-29	BDL	7.17	349	192	08	10	60	65	60	48	0.15	BDL	1.1	1.8	19	BDL	Negative	Negative
Hydos	BWT-30	BDL	6.50	344	189	20	17	120	60	65	24	0.13	BDL	0.7	BDL	20	0.3	Negative	Negative
Hibba	BWT-31	BDL	5.56	307	169	24	12	110	40	56	18	0.06	BDL	4.0	3.0	23	0.2	Negative	Negative
Yes	BWT-32	BDL	6.57	238	131	20	05	70	30	50	22	0.19	BDL	0.7	0.3	16	BDL	Negative	Negative
Aqua Mania	BWT-33	BDL	6.80	407	224	24	22	150	65	70	24	BDL	BDL	1.1	0.2	38	BDL	Negative	Negative
Kpl	BWT-34	BDL	6.90	362	199	16	17	110	50	60	32	0.10	BDL	2.4	6.6	20	BDL	Negative	Negative
Aura	BWT-35	BDL	7.30	387	213	32	15	140	40	86	23	BDL	BDL	2.4	BDL	33	BDL	Negative	Negative
Viva	BWT-36	BDL	6.82	310	171	20	12	100	50	48	26	0.06	BDL	1.3	0.7	37	0.3	Negative	Negative
Pearl	BWT-37	BDL	6.97	326	179	20	15	110	60	50	24	0.01	BDL	2.9	BDL	35	BDL	Negative	Negative
Droplet	BWT-38	BDL	6.82	420	231	40	10	140	110	45	32	0.10	BDL	2.0	0.3	35	BDL	Negative	Negative

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



Brand Name	Brand Code	Turbi dity	pH	EC	TDS	Ca	Mg	Hard	HCO ₃	Cl	Na	F	Fe	K	NO ₃	SO ₄	As	* Microbiological Contaminants		
																		Total Coli forms 0/100ml	E-Coli 0/100ml	
PSQCA Bottled Water Standards	-	0.5	6.5 - 8.5	NGV S	500	100	50	NGVS	NGV S	250	50	0.7	0.3	10	10	250	10		Total Coli forms 0/100ml	E-Coli 0/100ml
Detection Limits	-	0.2	0.02	0.287	-	2	1	5	5	2	1	0.03	0.03	0.2	0.06	0.4	0.1		-	-
DESERT DEW	BWT-39	BDL	8.61	385	212	16	22	130	160	10	28	0.28	BDL	4.0	BDL	20	-		Negative	Negative
Zam	BWT-40	BDL	6.98	350	193	36	12	140	50	60	16	0.05	BDL	0.8	BDL	40	0.2		Negative	Negative
Pura Light	BWT-41	BDL	7.17	313	172	16	17	110	50	48	22	0.05	BDL	0.8	BDL	38	2		Negative	Negative
RO Plant pk	BWT-42	BDL	6.60	402	221	32	22	170	30	122	14	0.06	BDL	0.7	BDL	BDL	0.2		Negative	Negative
FAIHA AQUA	BWT-43	BDL	7.40	335	184	36	13	138	40	59	18	BDL	BDL	0.6	BDL	45	BDL		Negative	Negative
Alfalah Mineral Water	BWT-44	BDL	6.97	371	204	40	15	160	30	72	12	1.11	BDL	0.9	BDL	48	BDL		Negative	Negative
Fresco	BWT-45	BDL	7.40	386	212	40	15	160	50	72	14	0.09	BDL	0.8	BDL	40	BDL		Negative	Negative
PIYAAS Plus	BWT-46	BDL	7.58	443	244	40	17	170	100	65	23	0.04	BDL	1.4	BDL	28	10		Negative	Negative
Barclay	BWT-47	BDL	6.72	286	157	28	10	110	40	50	12	BDL	BDL	1.0	BDL	30	2		Negative	Negative
7 Blue	BWT-48	BDL	7.09	346	190	20	12	100	50	68	33	0.14	BDL	0.9	BDL	26	2		Negative	Negative
Elayn Plus	BWT-49	BDL	7.40	370	204	20	19	130	60	65	26	0.18	BDL	1.3	BDL	31	3		Negative	Negative
Water Candy	BWT-50	BDL	6.90	382	210	24	15	120	70	68	36	0.08	BDL	1.1	BDL	28	0.3		Negative	Negative
National	BWT-51	BDL	7.20	304	167	20	15	110	50	60	20	BDL	BDL	0.7	0.3	18	BDL		Negative	Negative
Oxygen+	BWT-52	BDL	6.77	358	197	24	17	130	50	65	22	BDL	BDL	2.0	0.5	34	BDL		Negative	Negative
Venora	BWT-53	BDL	7.80	358	197	28	19	150	120	14	11	BDL	BDL	2.4	0.5	36	BDL		Negative	Negative
Elim	BWT-54	BDL	6.66	194	107	8	10	60	60	21	18	0.10	BDL	1.4	0.4	11	BDL		Negative	Negative
Himalaya	BWT-55	BDL	6.85	268	147	26	10	105	50	48	15	BDL	BDL	0.5	0.4	17	0.2		Negative	Negative
Deosai	BWT-56	BDL	6.92	347	191	32	10	120	70	52	24	0.10	BDL	0.2	BDL	30	BDL		Negative	Negative
HAYAT	BWT-57	BDL	6.75	378	208	24	19	140	60	72	23	0.03	BDL	BDL	BDL	29	BDL		Negative	Negative
AQUAX	BWT-58	BDL	7.20	378	208	24	19	140	130	20	22	0.11	BDL	0.8	3.5	20	BDL		Negative	Negative
Al-Saudia (Water Pack)	BWT-59	BDL	6.71	286	157	12	17	100	60	48	20	BDL	BDL	2.2	BDL	21	0.24		Negative	Negative
Calci Dew	BWT-60	BDL	6.51	230	127	16	12	90	50	34	11		BDL	1.1	0.5	18	BDL		Negative	Negative
Maple Plus	BWT-61	BDL	7.26	467	257	60	12	200	180	20	18	0.29	BDL	0.9	2.4	20	BDL		Negative	Negative

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



Brand Name	Brand Code	Turbidity	pH	EC	TDS	Ca	Mg	Hard	HCO ₃	Cl	Na	F	Fe	K	NO ₃	SO ₄	As	* Microbiological Contaminants	
PSQCA Bottled Water Standards	-	0.5	6.5 - 8.5	NGV S	500	100	50	NGVS	NGV S	250	50	0.7	0.3	10	10	250	10	Total Coli forms 0/100ml	E-Coli 0/100ml
Detection Limits	-	0.2	0.02	0.287	-	2	1	5	5	2	1	0.03	0.03	0.2	0.06	0.4	0.1	-	-
Aquantis	BWT-62	BDL	6.90	290	160	30	9	110	60	37	16	0.15	BDL	1.3	0.4	30	BDL	Negative	Negative
Sea Pack	BWT-63	BDL	6.80	469	258	52	12	180	80	65	27	0.03	BDL	BDL	BDL	62	0.2	Negative	Negative
Softin	BWT-64	BDL	6.96	295	162	36	05	110	60	44	16	0.03	BDL	0.3	0.4	23.4	BDL	Negative	Negative
Fresh Drop	BWT-65	BDL	7.24	373	205	60	02	160	150	26	12	0.30	BDL	1.0	1.4	25	BDL	Negative	Negative
Hydr8	BWT-66	BDL	7.10	490	270	60	12	200	160	32	21	0.32	BDL	0.9	2.3	30	BDL	Negative	Negative
Water Mart	BWT-67	BDL	7.10	394	217	36	12	140	70	60	26	BDL	BDL	1.9	BDL	42	1.20	Negative	Negative
Pure Fine	BWT-68	BDL	6.95	429	236	44	17	180	40	77	14	0.06	BDL	2.4	BDL	60	1.50	Negative	Negative
Sprova	BWT-69	BDL	7.05	387	213	40	12	150	50	90	17	BDL	BDL	2.0	BDL	13	1.25	Negative	Negative
Aqua Safe	BWT-70	BDL	7.59	339	186	20	12	100	85	36	30	BDL	BDL	2.8	BDL	32	1.55	Negative	Negative
Gourmet	BWT-71	BDL	7.07	414	228	40	07	130	70	65	32	BDL	BDL	2.0	BDL	40	0.83	Negative	Negative
Jami Water	BWT-72	BDL	7.10	310	171	20	05	70	110	18	40	0.11	BDL	2.2	BDL	22	0.91	Negative	Negative
Dasani	BWT-73	BDL	7.19	225	124	22	06	80	80	BDL	13	0.10	BDL	4.3	BDL	32	3.31	Negative	Negative
ZAMS	BWT-74	BDL	6.73	244	134	20	10	90	40	35	15	BDL	BDL	2.0	BDL	32	0.83	Negative	Negative
Rahat	BWT-75	BDL	6.77	325	179	20	07	80	80	10	38	0.68	BDL	2.0	BDL	60	0.89	Negative	Negative
Pure It	BWT-76	BDL	6.87	565	311	36	19	170	90	110	48	0.20	BDL	2.4	BDL	35	3.30	Negative	Negative
Aqua One	BWT-77	BDL	7.55	299	164	40	0	100	50	50	20	BDL	BDL	1.5	BDL	24	0.81	Negative	Negative
ATLANTIS	BWT-78	BDL	6.88	267	147	36	05	110	55	48	10	0.4	BDL	0.9	0.13	07	BDL	Negative	Negative