



# QUARTERLY REPORT BOTTLED WATER QUALITY

(January-March, 2015)



**PAKISTAN COUNCIL OF RESEARCH IN WATER RESOURCES**

**Ministry of Science & Technology**

**Khyban-e-johar, H-8/1, Islamabad.**

[www.pcrwr.gov.pk](http://www.pcrwr.gov.pk)

January-March, 2015



## 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 January-March, 2015 following is the brief overview of the findings.

### Quarterly Monitoring of Bottled/Mineral Water (January-March, 2015)

|   |  |  |
|---|--|--|
| <b>No. of Brands Collected</b>              | 71   |  |
| <b>No. of Cities Targeted</b>               | 07<br>(Islamabad, Rawalpindi, Tando Jam, Lahore, Quetta, Sialkot and Karachi). |  |
| <b>No. of Overall Safe Brands</b>           | 63   |  |
| <b>Overall Unsafe Brands (08)</b>           | <b>Brand Name</b>  | <b>Manufacturer(s)</b>   |
|   | Al-Haider  | Gulshan Iqbal Park, China Chowk, Sialkot. 0321-7190360   |
|   | Noble  | Tower Market, Hakeem Habib Road, Hyderabad.  |
|   | Drop Ice   | Bottled by house of S&G Email: <a href="mailto:dropicewater@gmail.com">dropicewater@gmail.com</a>                                |
|   | Al-Sana  | Al-Sana Foods & Beverages 2-Shamas Block Rizwan Garden Jallo Park Road Lahore  |
|   | Days Pure  | Bottled by Days Pure Lahore. 54000 Pakistan  |
|   | Effort   | Bottled by Effort Cooperation, 83-A, Shadman-II, Lahore. Email: <a href="mailto:effort_corp@gmail.com">effort_corp@gmail.com</a> |
|   | Aqua Safe  | Aqua Safe Pakistan (Pvt.) Ltd. 96-McLead Road, Lahore.   |
| <b>Butt</b>                                 | A product of Azhar & Company Gulberg-III, Lahore.                              |  |
| <b>Chemically Safe Brands</b>               | 66   |  |
| <b>Chemically Unsafe Brands</b>             | <b>Arsenic: 03</b><br>Al-Sana, Aqua Safe & Days Pure.                          |  |
|   | <b>Sodium: 03</b><br>Noble, Days Pure & Aqua Safe                              |  |
|   | <b>Potassium: 01</b><br>Al-Haider  |  |
| <b>No. of Microbiologically Safe Brands</b> | 68   |  |
| <b>Microbiologically Unsafe Brands</b>      | 03<br>Drop Ice, Effort & Butt  |  |



## 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 at source of production 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      | 71   |   |
| No. of Cities Targeted       | 07 (Islamabad, Rawalpindi, Lahore, Tando Jam, Sialkot, Quetta, and Karachi).   |   |
| Composition of Sampling Team | One Research Officer and Two Laboratory Assistants   |   |
| Sampling Procedure           | Samples of seventy one commercially available brands of mineral/bottled water were collected from local market of eight 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 January-March, 2015. 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   |
|-----------------|------------|----------|--------------------|----------------|--------|--|--|
| ECO             | BWE-01     | Sialkot  | 13-02-2015         | 01-2016        | 0.6lit | J&J Foods & Beverages, Roral Road, Naul Chowk, Sialkot                   | J&J Foods & Beverages, Roral Road, Naul Chowk, Sialkot                 |
| Al-Shalal       | BWE-02     | Sialkot  | 12-02-2015         | 12-2015        | 0.6lit | AZO Enterprises, 14-km Aimanabad Sialkot                                 | AZO Enterprises, 14-km Aimanabad Sialkot                               |
| Vina            | BWE-03     | Sialkot  | 13-02-2015         | 01-2016        | 0.6lit | Al-Sultan Beverages Industries, Chaprar Road, Gul bahar, Kalan Sialkot   | Al-Sultan Beverages Industries, Chaprar Road, Gul bahar, Kalan Sialkot |
| Rise Water      | BWE-04     | Sialkot  | 12-02-2015         | 06-2015        | 0.6lit | Pure Foods Sialkot 3-km, Kingra Road, Sialkot                            | Pure Foods Sialkot: 3-km, Kingra Road, Sialkot                         |
| Athar           | BWE-05     | Sialkot  | 12-02-2015         | 02-2016        | 0.5lit | E-Mail:Ajva Rise@gmail.com   | E-Mail:Ajva Rise@gmail.com   |
| Isberg          | BWE-06     | Sialkot  | 13-02-2015         | 02-2016        | 0.6lit | Premier Water Refining Company, Dhobola, Road, Sialkot.                  | Premier Water Refining Company, Dhobola, Road, Sialkot.                |
| Aqua Save       | BWE-07     | Sialkot  | 13-02-2015         | 01-2016        | 0.6lit | SFS Mineral Water Company: Wazirabad Road, Jalianwala Ugoki, Sialkot     | SFS Mineral Water Company: Wazirabad Road, Jalianwala Ugoki, Sialkot   |
| Al-Haider       | BWE-08     | Sialkot  | 12-02-2015         | 10-2015        | 0.5lit | Gulshan Iqbal Park, China Chowk, Sialkot                                 | Gulshan Iqbal Park, China Chowk, Sialkot                               |
| Kinley          | BWE-09     | TandoJam | 24-02-2015         | 07-2015        | 0.5lit | New Memon Medical & General Store, Cold Corner Shop, Naka Stop, TandoJam | Coca-Cola Beverages Pvt Ltd. CCBPL 5E-II Gulberg III Lahore Pakistan   |
| Aqua Fina       | BWE-10     | TandoJam | 24-02-2015         | 09-2015        | 0.5lit | Abdul Rahim Book Depot, Bakers & G. Store, near Railway Gate, TandoJam   | Survey # 212, Deh Konkar, District Malir, Karachi.                     |
| Nestle          | BWE-11     | TandoJam | 24-02-2015         | 07-2016        |        | Abdul Rahim Book Depot, Bakers & G. Store, near Railway Gate, TandoJam   | Bottled by Nestle Pakistan 308, Upper Mall, Lahore.                    |
| Noble           | BWE-12     | TandoJam | 24-02-2015         | 12-2016        | 0.6lit | New Memon Medical General Store, Cold Corner, Naka Stop, TandoJam        | Tower Market, Hakeem Habib Road, Hyderabad.                            |
| Sunlay          | BWE-13     | TandoJam | 24-02-2015         | 12-2015        | 0.6lit | Pir Bux Mini Mart, TandoJam  | Hani Patel Enterprises, 27/1, Nazimabad No.1, Karachi.                 |
| Aqua Blue Drops | BWE-14     | TandoJam | 24-02-2015         | -              | 0.6lit | Abdul Rahim Book Depot, Bakers & G. Store, near                          | So-Safe Water Technology Karachi.                                      |

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



| Brand Name          | PCRWR Code | City       | Date of Collection | Date of Expiry | Size    | Name & Address of Seller/Shop Keeper  | Manufacturer's Address  |
|---------------------|------------|------------|--------------------|----------------|---------|---|---|
|                     |            |            |                    |                |         | Railway Gate, TandoJam  |   |
| Oslo                | BWE-15     | TandoJam   | 24-02-2015         | 06-2015        | 0.6lit  | Abdul Rahim Book Depot, Bakers & G. Store, near Railway Gate, TandoJam                          | Oslo International, 14-Ramzan Chamber, Dr. Bellmore, Street # Off 1.1, Chandigarh Road, Karachi.  |
| Naseeb              | BWE-16     | TandoJam   | 24-02-2015         | -              | 0.6lit  | New Memon Medical General Store, Cold Corner, Naka Stop, TandoJam                               | Maza Beverages (Pvt)Ltd Head Office Gori Kholo Hyderabad  |
| Water Empire        | BWE-17     | Islamabad  | 05-03-2015         | 03-2016        | 1.5 lit | Plot#8, St#4, I-10/3, Islamabad   | Plot#8, St#4, I-10/3, Islamabad   |
| Maple Dew           | BWE-18     | Islamabad  | 05-03-2015         | -              | 1.5 lit | Maple Associate, Park Road, Islamabad   | Maple Associate, Park Road, Islamabad   |
| Freshle             | BWE-19     | Rawalpindi | 05-03-2015         | 09-2015        | 1.5 lit | A-1, Gulzar-e-Qaid, Rawalpindi  | A-1, Gulzar-e-Qaid, Rawalpindi  |
| Nectar              | BWE-20     | Islamabad  | 05-03-2015         | 03-2016        | 1.5 lit | Plot#14/10, Markaz G-7, Islamabad.  | Plot#14/10, Markaz G-7, Islamabad.  |
| Verbena             | BWE-21     | Rawalpindi | 10-03-2015         | 03-2016        | 0.5 lit | Vizor Pharma(Pvt)Ltd. 82,Lalazar Estate Rawalpindi  | Vizor Pharma(Pvt)Ltd.82,Lalazar Estate Rawalpindi   |
| A.R. Water          | BWE-22     | Islamabad  | 10-03-2015         | 12-2016        | 0.5 lit | Plot#18, Main Road, RCCI Industrial & Estate, Rawat, Islamabad.                                 | Plot#18, Main Road, RCCI Industrial & Estate, Rawat, Islamabad.                                   |
| Al-Saudi Water Pack | BWE-22     | Islamabad  | 10-03-2015         | 12-2016        | 0.5 lit | Burma Town, Lehtrar Road, Islamabad   | Burma Town, Lehtrar Road, Islamabad   |
| Deosai              | BWE-24     | Islamabad  | 10-03-2015         | 09-2015        | 1.5 lit | Margalla Foods & Beverages: Plot#32, Khayaban-e-Johar, Industrial Area, Sector I-9/2, Islamabad | Margalla Foods & Beverages: Plot#32, Khayaban-e-Johar, Industrial Area, Sector I-9/2, Islamabad   |
| A-One               | BWE-25     | Rawalpindi | 10-03-2015         | -              | 1.5 lit | Plot # 152, St.5, Sector-3, KRL Road, Rawalpindi  | Plot # 152, St.5, Sector-3, KRL Road, Rawalpindi  |
| Hydra               | BWE-26     | Islamabad  | 10-03-2015         | -              | 1.5 lit | 31-A, Sector I-9, Islamabad   | 31-A, Sector I-9, Islamabad   |
| Springley           | BWE-27     | Quetta     | 04-03-2015         | 02-2016        | 1.5 lit | Nazar Medical Store Opp.Civil Hospital M.A Jinnah Road Quetta                                   | Jam-e-Shirin, Boulevard 14-G, Gulberg-III, Lahore.  |
| Aqua Hygienic (a)   | BWE-28     | Quetta     | 04-03-2015         | 02-2016        | 1.5 lit | Nazar Medical Store Opp.Civil Hospital M.A Jinnah Road Quetta                                   | Plot#2, St.12, Faisal Town, Brewery Road, Quetta.   |
| Drop Ice            | BWE-29     | Quetta     | 04-03-2015         | -              | 1.5 lit | Shahid General Store Quetta   | Bottled by house of S&G Email: <a href="mailto:dropicewater@gmail.com">dropicewater@gmail.com</a> |
| Murree Sparkletts   | BWE-30     | Lahore     | 04-03-2015         | 01-2016        | 0.5lit  | Khushi & Sons, Chowk Yateem Khana, Lahore.  | Plot # 10/2, Phase-III, Industrial Estate, Hattar.  |

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| Brand Name         | PCRWR Code | City   | Date of Collection | Date of Expiry | Size    | Name & Address of Seller/Shop Keeper                           | Manufacturer's Address  |
|--------------------|------------|--------|--------------------|----------------|---------|--|---|
| Al-Sana            | BWE-31     | Lahore | 04-03-2015         | 01-2015        | 0.6 lit | Allah Shensha Pan Shop, Chuburgi Chowk, Lahore.                | Al-Sana Foods & Beverages 2-Shamas Block Rizwan Garden Jallo Park Road Lahore               |
| Aqua Dew           | BWE-32     | Lahore | 04-03-2015         | 07-2015        | 0.6 lit | Bismillah Pan Shop, Chuburgi Chowk, Lahore.                    | Mustafa & Hamza Foods: N-Block, Sabzazar, Lahore.   |
| Sweet Water        | BWE-33     | Lahore | 04-03-2015         | 02-2016        | 0.5lit  | Mashallah Pan Shop, Marian Stop, Model Town, Lahore.           | Al-Madina Group, behind Faisal Bank, 1-km, Raiwind Road, Lahore.                            |
| Klinz              | BWE-34     | Lahore | 03-03-2015         | 08-2015        | 0.6 lit | M.A. Super General Store, R1, Johar Town, Lahore.              | Klinz Food, (Pvt) Ltd. 60-L, Model Town, Ext-Lahore.  |
| Aqua Mashmoom      | BWE-35     | Lahore | 03-03-2015         | 03-2015        | 0.6 lit | Mian Super & General Store, Main Sher shah Colony Road, Lahore | Mashmoom (Pvt) Ltd Plot # 154/3 154/4 Phase V Industrial Estate Hattar                      |
| Aqua Hygienic (b)  | BWE-36     | Lahore | 03-03-2015         | 07-2015        | 0.6 lit | Qadri Pan Shop, Dubai Town, Raiwind Road, Lahore.              | 10-Abbott Road, Khurshid Building, near PTV Station, Lahore.                                |
| Sufi Mineral Water | BWE-37     | Lahore | 03-03-2015         | 01-2017        | 0.6 lit | M.A. Super Store, R1 block, Johar Town, Lahore.                | Hadayat Food Stuff Industries (Pvt.) Ltd. 1-B, Garden Block, Garden Town, Lahore.           |
| Aqua Pure          | BWE-38     | Lahore | 03-03-2015         | 06-2016        | 0.6 lit | M.A. Super Store, R1 block, Johar Town, Lahore.                | Aqua Pure (Pvt.) Ltd. 16-A, Block 5-C, Anwar Chowk, Township, Lahore.                       |
| Avalon             | BWE-39     | Lahore | 04-03-2015         | 09-2015        | 0.6 lit | Nirala Pan Shop, Chowk Sodday Wal, Samanabad Road, Lahore.     | Life Food Products, Samsani Road, Hanjarwal, Lahore.  |
| Pure Fine          | BWE-40     | Lahore | 03-03-2015         | 01-2016        | 0.6 lit | Bukhari Sweets & Bakers, Shahpur Kanjran, Multan Road Lahore   | 23-Iqbal Street, Opp. Saidpur Grid Station, Multan Road, Lahore.                            |
| Days Pure          | BWE-41     | Lahore | 04-03-2015         | -              | 0.6 lit | Roshan Pan Shop, Main Samanabad Road, Quetta.                  | Bottled by Days Pure Lahore.54000 Pakistan  |
| Aftab Qarshi       | BWE-42     | Lahore | 04-03-2015         | 02-2016        | 0.5lit  | Ali Younas Pan Shop, Chowk Yateem Khana, Lahore                | Aftab Qarshi, Herbal Laboratories, Water Division, Muzamil Town, 20-km Multan Road, Lahore. |
| Effort             | BWE-43     | Lahore | 04-03-2015         | 12-2015        | 0.6 lit | Paradise Pharmacy, Shadman, Lahore.                            | Bottled by Effort Cooperation, 83-A, Shadman-II, Lahore. Email: effort_corp@gmail.com       |
| Aqua Safe          | BWE-44     | Lahore | 04-03-2015         | 11-2015        | 0.6 lit | Roshan Pan Shop, Main Samanabad Road, Lahore.                  | Aqua Safe Pakistan (Pvt.) Ltd. 96-McLead Road, Lahore.                                      |
| Aqua RO 7          | BWE-45     | Lahore | 03-03-2015         | 11-2015        | 0.6 lit | Hamayun Pan Shop, Dubai Town, Raiwind Road, Lahore             | Waqar Haider Brothers, Hasan kot, 7.5-km Raiwind Road, Lahore.                              |
| Aina Aab-e-Hayat   | BWE-46     | Lahore | 05-03-2015         | 11-2015        | 0.6 lit | Shahzad Pan Shop, Pind Arainan, Main                           | Kabir Street, Urdu Bazar, Lahore  |

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| Brand Name          | PCRWR Code | City    | Date of Collection | Date of Expiry | Size    | Name & Address of Seller/Shop Keeper                         | Manufacturer's Address   |
|---------------------|------------|---------|--------------------|----------------|---------|--|--|
|                     |            |         |                    |                |         | Raiwind Road, Lahore   |  |
| JalPak              | BWE-47     | Lahore  | 05-03-2015         | -              | 0.6 lit | Shahzad Pan Shop, Arainan, Raiwind Lahore                    | Bottled by Sahir Associate, Lahore.  |
| Doce                | BWE-48     | Lahore  | 05-03-2015         | 02-2016        | 0.6 lit | Doce Bakery and Sweets, Shaukat Khanum Hospital, Lahore      | 48-M, Quaid-e-Azam Industrial State, Kot Lakhpat, Lahore.                                  |
| Butt                | BWE-49     | Lahore  | 05-03-2015         | 08-2015        | 1.5 lit | Butt Bakers, Main Raiwind Road, Thokar Niaz Baig, Lahore.    | A product of Azhar & Co., Gulberg-III, Lahore.   |
| Gourmet Water       | BWE-50     | Lahore  | 05-03-2015         | 08-2015        | 1.5 lit | Gourmet Bakers, Main Raising Road, Thokar Niaz Baig, Lahore. | Gourmet Foods, Gate # 1, Plot #1-5, Sundar Industrial Estate, Raiwind Sundar Road, Lahore. |
| Dewan Water Express | BWE-51     | Lahore  | 03-03-2015         | 02-2016        | 1.5 lit | Jahangir Medical Store, Mohalanwal, Lahore.                  | Dewan Foods, 168, Shah Jamal Lahore.   |
| KRISCO Water        | BWE-52     | Lahore  | 04-03-2015         | 02-2016        | 1.5 lit | Nasir Sweets and Bakers, Arainan Pind, Raiwind Road, Lahore. | 10-Defence Road, Off. Raiwind Road, Lahore.  |
| Jers Water          | BWE-53     | Lahore  | 04-03-2015         | 02-2016        | 1.5 lit | Nasir Sweets & Bakers, Arainan Pind, Raiwind Road, Lahore.   | Jers Traders, Opp. Bismillah CNG, Gujranwala Road, Daska.                                  |
| Aqua Natural        | BWE-54     | Lahore  | 03-03-2015         | 03-2016        | 1.5 lit | New Jani Pan Shop, GT Road, Shahdra, Lahore                  | Aqua Natural, Gujranwala Road, Daska   |
| Aqua Mania          | BWE-55     | Karachi | 10-03-2015         | 12-2016        | 0.6 lit | Haroon Medical & General Store, Landhi, Karachi.             | A Product of Manialite company   |
| Hydro Clear         | BWE-56     | Karachi | 10-03-2015         | 12-2015        | 0.6 lit | Bismillah Bakery, Malir City, Karachi                        | Hydro Safe Pakistan: 15/25, Model Colony Karachi. Email: clear_hp@hotmail.com              |
| Al-Sahar            | BWE-57     | Karachi | 09-03-2015         | -              | 0.6 lit | Sweet Nimko, Shop 32, 24 Safora Chorangi, Karachi.           | Al-Safrrat International: Plot # C-68, Site Super Highway Industrial Area, Karachi         |
| Nash                | BWE-58     | Karachi | 09-03-2015         | -              | 0.6 lit | Lal Store, Near Landhi Hospital, Karachi.                    | Nash Enterprises: Block 13-D, Gulshan e Iqbal, Karachi                                     |
| Orion               | BWE-59     | Karachi | 10-03-2015         | -              | 1.5 lit | Bismillah bakery, Malir Area, Karachi.                       | Orion Foods: Site E-1, Suite No.2, Defence View, Phase-II, Karachi.                        |
| Livon               | BWE-60     | Karachi | 09-03-2015         | 12-2015        | 1.5 lit | Haroon Medical & General Store, Landhi, Karachi.             | -  |
| Mag life            | BWE-61     | Karachi | 10-03-2015         | -              | 1.5 lit | Bismillah General Sapora Store, Goth, Karachi                | S-1, Ground Flood, West Land Trade Centre, block 7-B, Shaheed-e-Millat Road, KCHS Karachi. |
| Vey                 | BWE-62     | Karachi | 10-03-2015         | 09-2016        | 1.5 lit | Akhtar Super General Store, Gulshan Johar, Karachi           | Fluid Technology Int'l(Pvt)Ltd.424,Bhayani Centre Block-M,North                            |

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



| Brand Name   | PCRWR Code | City    | Date of Collection | Date of Expiry | Size    | Name & Address of Seller/Shop Keeper                         | Manufacturer's Address   |
|--------------|------------|---------|--------------------|----------------|---------|--|--|
|              |            |         |                    |                |         |  | Nazimabad Karachi  |
| Safe Life    | BWE-63     | Karachi | 10-03-2015         | -              | 1.5 lit | Super General Store, Sapora Goth, Karachi.                   | Plot # 411, M. Colony Garden West, Karachi   |
| Al-Massafi   | BWE-64     | Karachi | 09-03-2015         | -              | 1.5 lit | Mushtaq Bakery & General Store, Site Road, Karachi.          | Al-Massafi Foods: Site Plot # S-3, S-4, Malir City Karachi.  |
| Pure 99      | BWE-65     | Karachi | 09-03-2015         | -              | 1.5 lit | Sweet & Nimco Shop, Sapora Chorangi, Karachi                 | Yasir Enterprises: Salman Tower, A-15, Mezzanine Floor, Opp. NADRA Office, Main National Highway, Karachi. |
| Al-Habib     | BWE-66     | Karachi | 09-03-2015         | 12- 2016       | 1.5 lit | Bismillah Bakery, Malir Area, Karachi.                       | E-10, Al-Azam Square, F.B. Area, Block-1, Karachi.   |
| Zindagi      | BWE-67     | Karachi | 09-03-2015         | -              | 1.5 lit | Sohail General Store, 52 Area, Malir, Karachi.               | A product of Zindagi International 021-35432033  |
| Crystal Maya | BWE-68     | Karachi | 09-03-2015         | -              | 1.5 lit | Waqar Sheereen Shop, 36-37, Al-Ateeq Marwat Landhi, Karachi. | Tilon Global, Off: B-221, 226, Hub, Baluchistan  |
| Leven        | BWE-69     | Karachi | 09-03-2015         | -              | 1.5 lit | Bismillah SB Store, Pathan Goth, Karachi                     | A Product of M.R. Industries: B-1, Block-20, F.B. Area, Karachi.   |
| Culligan     | BWE-70     | Karachi | 09-03-2015         | -              | 1.5 lit | Nagori Super Store, Sasora Goth, Karachi.                    | Culligan Water of Pakistan, Johan (Pvt) Ltd. F-17/A, Hub river Road, S.I.T.E. Karachi                      |
| Dam          | BWE-71     | Karachi | 09-03-2015         | 12- 2016       | 1.5 lit | Al-Madina General Store, 5-2 Area, Malir, Karachi            | DAM Waters: 47/1, Siddiquabad, Model Colony Karachi.   |

**WATER QUALITY PARAMETERS AND METHODS USED FOR ANALYSIS**

| Sr. # | PARAMETERS                              | ANALYTICAL METHOD                                       |
|-------|---|---|
| 1.    | Alkalinity (mg/l as CaCO <sub>3</sub> ) | 2320, Standard method (2005) APHA                       |
| 2.    | Arsenic (ppb)                           | AAS Vario 6, Analytik Jena AG                           |
| 3.    | Bicarbonate                             | 2320, Standard method (2005) APHA                       |
| 4.    | Calcium (mg/l)                          | 3500-Ca-D, Standard Method (2005) APHA                  |
| 5.    | Carbonate (mg/l)                        | 2320, Standard method (2005)                            |
| 6.    | Chloride (mg/l)                         | Titration (Silver Nitrate), Standard Method (2005) 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 (2005) APHA             |
| 10.   | Magnesium (mg/l)                        | 2340-C, Standard Method (2005) APHA                     |
| 11.   | Nitrate Nitrogen (mg/l)                 | Cd. Reduction (Hach-8171) by Spectrophotometer          |
| 12.   | Odor                                    | Sensory Test  |



PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



|     |                             |  |
|-----|-----------------------------|--|
| 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 (2005) 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 (2005) APHA                             |
| 24. | E. Coli (MPN/100ml)         | 9221-B,C&D, Standard Methods (2005) 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.    | Co lour         | (TCU)     | 15                 | NGVS | 5               |
| 7.    | Conductivity    | (µS/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

#### Arsenic: Safe Limit : 10 parts per billion (ppb)

| Sr. No | Brand Name | Code   | City of Manufacturing | Unit | Results |
|--------|------------|--------|-----------------------|------|---------|
| 1.     | Al-Sana    | BWE-31 | Lahore                | ppb  | 32      |
| 2.     | Days Pure  | BWE-41 | Lahore                | ppb  | 35      |
| 3.     | Aqua Safe  | BWE-44 | Lahore                | ppb  | 11      |

#### Sodium: Safe Limit : 50 parts per million (ppm)

| Sr. No | Brand Name | Code   | City of Manufacturing | Unit | Results |
|--------|------------|--------|-----------------------|------|---------|
| 1.     | Noble      | BWE-12 | Hyderabad             | ppm  | 78      |
| 2.     | Al-Sana    | BWE-31 | Lahore                | ppm  | 102     |
| 3.     | Days Pure  | BWE-41 | Lahore                | ppm  | 110     |

#### Potassium : Safe Limit : 10 parts per million (ppm)

| Sr. No | Brand Name | Code   | City of Manufacturing | Unit | Results |
|--------|------------|--------|-----------------------|------|---------|
| 1.     | Al-Haider  | BWE-08 | Sialkot               | ppm  | 19.8    |

#### BACTERIOLOGICAL: (Total Coliforms , Fecal Coliforms & E Coli) (Safe Limit: 0/100ml)

| Sr. No | Brand Name | Code   | Results                     |                     |
|--------|------------|--------|-----------------------------|---------------------|
|        |            |        | Total Coliforms (MPN/100ml) | E. Coli (MPN/100ml) |
| 1.     | Drop Ice   | BWE-29 | 04                          | Nil                 |
| 2.     | Effort     | BWE-43 | 12                          | Nil                 |
| 3.     | Butt       | BWE-49 | 09                          | Nil                 |

### PCRWR TESTING: SAFE BRANDS

| Sr. No | Brand Name      | Code   | Quality (Safe/Unsafe) |                 |
|--------|-----------------|--------|-----------------------|-----------------|
|        |                 |        | Chemical              | Microbiological |
| 1.     | ECO             | BWE-01 | Safe                  | Safe            |
| 2.     | Al-Shalal       | BWE-02 | Safe                  | Safe            |
| 3.     | Vina            | BWE-03 | Safe                  | Safe            |
| 4.     | Rise Water      | BWE-04 | Safe                  | Safe            |
| 5.     | Athar           | BWE-05 | Safe                  | Safe            |
| 6.     | Isberg          | BWE-06 | Safe                  | Safe            |
| 7.     | Aqua Save       | BWE-07 | Safe                  | Safe            |
| 8.     | Kinley          | BWE-09 | Safe                  | Safe            |
| 9.     | Aqua Fina       | BWE-10 | Safe                  | Safe            |
| 10.    | Nestle          | BWE-11 | Safe                  | Safe            |
| 11.    | Sunlay          | BWE-13 | Safe                  | Safe            |
| 12.    | Aqua Blue Drops | BWE-14 | Safe                  | Safe            |
| 13.    | Oslo            | BWE-15 | Safe                  | Safe            |
| 14.    | Naseeb          | BWE-16 | Safe                  | Safe            |
| 15.    | Water Empire    | BWE-17 | Safe                  | Safe            |

PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



| Sr. No | Brand Name          | Code   | Quality (Safe/Unsafe) |                 |
|--------|---------------------|--------|-----------------------|-----------------|
|        |                     |        | Chemical              | Microbiological |
| 16.    | Maple Dew           | BWE-18 | Safe                  | Safe            |
| 17.    | Freshle             | BWE-19 | Safe                  | Safe            |
| 18.    | Nectar              | BWE-20 | Safe                  | Safe            |
| 19.    | Verbena             | BWE-21 | Safe                  | Safe            |
| 20.    | A.R. Water          | BWE-22 | Safe                  | Safe            |
| 21.    | Al-Saudi Water Pack | BWE-22 | Safe                  | Safe            |
| 22.    | Deosai              | BWE-24 | Safe                  | Safe            |
| 23.    | A-One               | BWE-25 | Safe                  | Safe            |
| 24.    | Hydra               | BWE-26 | Safe                  | Safe            |
| 25.    | Springley           | BWE-27 | Safe                  | Safe            |
| 26.    | Aqua Hygienic (a)   | BWE-28 | Safe                  | Safe            |
| 27.    | Murree Sparkletts   | BWE-30 | Safe                  | Safe            |
| 28.    | Aqua Dew            | BWE-32 | Safe                  | Safe            |
| 29.    | Sweet Water         | BWE-33 | Safe                  | Safe            |
| 30.    | Klinz               | BWE-34 | Safe                  | Safe            |
| 31.    | Aqua Mashmoom       | BWE-35 | Safe                  | Safe            |
| 32.    | Aqua Hygienic (b)   | BWE-36 | Safe                  | Safe            |
| 33.    | Sufi Mineral Water  | BWE-37 | Safe                  | Safe            |
| 34.    | Aqua Pure           | BWE-38 | Safe                  | Safe            |
| 35.    | Avalon              | BWE-39 | Safe                  | Safe            |
| 36.    | Pure Fine           | BWE-40 | Safe                  | Safe            |
| 37.    | Aftab Qarshi        | BWE-42 | Safe                  | Safe            |
| 38.    | Aqua RO 7           | BWE-45 | Safe                  | Safe            |
| 39.    | Aina Aab-e-Hayat    | BWE-46 | Safe                  | Safe            |
| 40.    | JalPak              | BWE-47 | Safe                  | Safe            |
| 41.    | Doce                | BWE-48 | Safe                  | Safe            |
| 42.    | Gourmet Water       | BWE-50 | Safe                  | Safe            |
| 43.    | Dewan Water Express | BWE-51 | Safe                  | Safe            |
| 44.    | KRISCO Water        | BWE-52 | Safe                  | Safe            |
| 45.    | Jers Water          | BWE-53 | Safe                  | Safe            |
| 46.    | Aqua Natural        | BWE-54 | Safe                  | Safe            |
| 47.    | Aqua Mania          | BWE-55 | Safe                  | Safe            |
| 48.    | Hydro Clear         | BWE-56 | Safe                  | Safe            |
| 49.    | Al-Sahar            | BWE-57 | Safe                  | Safe            |
| 50.    | Nash                | BWE-58 | Safe                  | Safe            |
| 51.    | Orion               | BWE-59 | Safe                  | Safe            |
| 52.    | Livon               | BWE-60 | Safe                  | Safe            |
| 53.    | Mag life            | BWE-61 | Safe                  | Safe            |
| 54.    | Vey                 | BWE-62 | Safe                  | Safe            |
| 55.    | Safe Life           | BWE-63 | Safe                  | Safe            |
| 56.    | Al-Massafi          | BWE-64 | Safe                  | Safe            |
| 57.    | Pure 99             | BWE-65 | Safe                  | Safe            |
| 58.    | Al-Habib            | BWE-66 | Safe                  | Safe            |
| 59.    | Zindagi             | BWE-67 | Safe                  | Safe            |
| 60.    | Crystal Maya        | BWE-68 | Safe                  | Safe            |
| 61.    | Leven               | BWE-69 | Safe                  | Safe            |
| 62.    | Culligan            | BWE-70 | Safe                  | Safe            |
| 63.    | Dam                 | BWE-71 | Safe                  | Safe            |



### PCRWR TESTING: UNSAFE BRANDS

| Sr. No | Brand Name | Code   | Address/<br>Manufacturer   | Quality (Safe/Unsafe) |                 |
|--------|------------|--------|--|-----------------------|-----------------|
|        |            |        |  | Chemical              | Microbiological |
| 1.     | Al-Haider  | BWE-08 | Gulshan Iqbal Park, China Chowk, Sialkot. 0321-7190360   | Unsafe                | Safe            |
| 2.     | Noble      | BWE-12 | Tower Market, Hakeem Habib Road, Hyderabad.  | Unsafe                | Safe            |
| 3.     | Drop Ice   | BWE-29 | Bottled by house of S&G Email: <a href="mailto:dropicewater@gmail.com">dropicewater@gmail.com</a>                                | Safe                  | Unsafe          |
| 4.     | Al-Sana    | BWE-31 | Al-Sana Foods & Beverages 2-Shamas Block Rizwan Garden Jallo Park Road Lahore  | Unsafe                | Safe            |
| 5.     | Days Pure  | BWE-41 | Bottled by Days Pure Lahore. 54000 Pakistan  | Unsafe                | Safe            |
| 6.     | Effort     | BWE-43 | Bottled by Effort Cooperation, 83-A, Shadman-II, Lahore. Email: <a href="mailto:effort_corp@gmail.com">effort_corp@gmail.com</a> | Safe                  | Unsafe          |
| 7.     | Aqua Safe  | BWE-44 | Aqua Safe Pakistan (Pvt.) Ltd. 96-McLead Road, Lahore.   | Unsafe                | Safe            |
| 8.     | Butt       | BWE-49 | A product of Azhar & Company Gulberg-III, Lahore.  | Safe                  | Unsafe          |

### MARKET CONSISTENCY IN TWO NEIGHBORING QUARTERS

| Sr. No | Consistent Brands   | New Brands           | Unavailable Brands   |
|--------|---------------------|----------------------|----------------------|
| 1.     | Kinley              | ECO                  | Fresh Life           |
| 2.     | Aquafina            | Al-Shalal            | Water Plus           |
| 3.     | Nestle              | Vina                 | Refresh Water        |
| 4.     | Noble               | Rise Water           | Deep Spring          |
| 5.     | Sunlay              | Athar                | Healthy Pure         |
| 6.     | Oslo                | Isberg               | Buxton               |
| 7.     | Maple Dew           | Aqua Save            | Moya Mineral Water   |
| 8.     | Freshle             | Al-Haider            | Natural Aqwah        |
| 9.     | Nectar              | Aqua Blue Drops      | Aqua Splash          |
| 10.    | Verbena             | Naseeb               | Aquatic Fresh        |
| 11.    | A.R Water           | Al-Saudia Water Pack | Nebraska             |
| 12.    | Hydra               | Deosai               | Qaswa                |
| 13.    | Springley           | A-One                | Top Fresh Water      |
| 14.    | Aqua Hygienic (a)   | Drop Ice             | Aqua National        |
| 15.    | Aqua Dew            | Water Empire         | Pure It              |
| 16.    | Aqua Mashmoom       | Murree Sparkletts    | Natur Aqua           |
| 17.    | Sufi Mineral Water  | Al-Sana              | Aab e Rahat          |
| 18.    | Avalon              | Sweet Water          | Best Natural         |
| 19.    | Aftab Qarshi        | KLINZ                | Sparkle              |
| 20.    | Aqua RO7            | Aqua Hygienic (b)    | Rain Drops           |
| 21.    | Aina Aab E Hayat    | Aqua Pure            | AJWA                 |
| 22.    | Doce                | Pure Fine            | Spin Water           |
| 23.    | Butt                | Days Pure            | Fresco               |
| 24.    | Gourmet Water       | Effort               | Pine'o               |
| 25.    | Dewan Water Express | Aqua Safe            | Fresco Healthy Water |
| 26.    | Al-Sahar            | JalPak               | ARWA                 |
| 27.    | Nash                | KRISCO Water         | MAZA                 |



|     |              |              |                |
|-----|--------------|--------------|----------------|
| 28. | Orion        | Jers Water   | Al-Masafi      |
| 29. | Vey          | Aqua Natural | Blu Water      |
| 30. | Safe Life    | Aqua Mania   | Sky Water      |
| 31. | Al-Masafi    | Hydro Clear  | Aab            |
| 32. | Zindagi      | Livon        | VIZ            |
| 33. | Crystal Maya | Mag Life     | Aabshaar Water |
| 34. | Culligan     | Pure 99      | Al-Safa Water  |
| 35. |              | Al-Habib     | AFRA           |
| 36. |              | LEVEN        | 1 Water        |
| 37. |              | Dam          | Marbella       |
| 38. |              |              | Gulfa          |
| 39. |              |              | Miracle        |
| 40. |              |              | Jel            |
| 41. |              |              | Ideal Life     |
| 42. |              |              | Askari         |

### DISEASE POTENTIAL FROM CONTAMINATED BOTTLED WATER

| Sr. No | Contaminant                          | Diseases Impacts   |
|--------|--------------------------------------|--|
| 1.     | <b>Bacteriological Contamination</b> | Cholera, Diarrhea, Dysentery, Hepatitis, Typhoid   |
| 2.     | <b>Arsenic</b>                       | Cancer (lungs, bladder, skin, prostate, kidney, nose and liver), diabetes kidney diseases, hypertension, heart diseases, birth defects, black foot diseases. |
| 3.     | <b>Sodium</b>                        | Hypertension   |
| 4.     |                                      | Hyperkalemia   |

### CONCLUSIONS

| Sr. No | Item                                   | Conclusion |       |
|--------|--|------------|-------|
|        |  | No.        | % age |
| 1.     | Total No. of Brands Collected          | 71         | -     |
| 2.     | Overall safe brands                    | 63         | 89    |
| 3.     | No. of overall unsafe brands           | 08         | 11    |
| 4.     | No. of Chemically safe brands          | 66         | 93    |
| 5.     | No. of Chemically unsafe brands        | 05         | 07    |
| 6.     | No. of Microbiologically safe brands   | 68         | 96    |
| 7.     | No. of Microbiologically unsafe brands | 03         | 04    |
| 8.     | No. of Consistent brands in Market     | 34         | 48    |
| 9.     | No. of brands disappeared from market  | 37         | 52    |
| 10.    | No. of new brands                      | 42         | 59    |

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

## PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



### Annexure-1

#### Chemical and Microbiological Quality of Bottled/Mineral Water Brands

| Brand Name                    | Brand Code | Turbidity | pH        | EC    | TDS | Ca  | Mg  | Hard | HCO <sub>3</sub> | Cl  | Na        | F    | PO <sub>4</sub> | Fe   | K           | NO <sub>3</sub> | SO <sub>4</sub> | As   | * Microbiological Contaminants |                 |
|-------------------------------|------------|-----------|-----------|-------|-----|-----|-----|------|------------------|-----|-----------|------|-----------------|------|-------------|-----------------|-----------------|------|--------------------------------|-----------------|
| PSQCA Bottled Water Standards | -          | 0.5       | 6.5 - 8.5 | NGVS  | 500 | 100 | 50  | NGVS | NGVS             | 250 | 50        | 0.7  | NGVS            | 0.3  | 10          | 10              | 250             | 10   | Total Coli forms 0/100 ml      | E-Coli 0/100 ml |
| Detection Limits              | -          | 0.2       | 0.02      | 0.287 | -   | 2   | 1   | 5    | 5                | 2   | 1         | 0.03 | 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             | ppm             | ppb  | MPN /100ml                     | MPN /100ml      |
| ECO                           | BWE-01     | BDL       | 7.21      | 422   | 232 | 30  | 21  | 160  | 90               | 56  | 34        | BDL  | BDL             | BDL  | 0.8         | BDL             | 52              | 1    | Nil                            | Nil             |
| Al-Shalal                     | BWE-02     | BDL       | 7.10      | 388   | 213 | 50  | 9   | 160  | 180              | 250 | 17        | 0.11 | BDL             | BDL  | 4.0         | BDL             | 2               | 8    | Nil                            | Nil             |
| Vina                          | BWE-03     | BDL       | 6.68      | 283   | 156 | 40  | 7   | 130  | 40               | 55  | 10        | BDL  | BDL             | BDL  | 0.4         | BDL             | 26              | 0.53 | Nil                            | Nil             |
| Rise Water                    | BWE-04     | BDL       | 7.08      | 320   | 176 | 24  | 10  | 100  | 130              | 20  | 26        | BDL  | BDL             | BDL  | 0.5         | BDL             | 5               | 1    | Nil                            | Nil             |
| Athar                         | BWE-05     | BDL       | 7.46      | 465   | 256 | 40  | 24  | 200  | 250              | 20  | 39        | 0.15 | BDL             | BDL  | 4.2         | BDL             | 3               | 1    | Nil                            | Nil             |
| Isberg                        | BWE-06     | BDL       | 7.04      | 356   | 196 | 40  | 10  | 140  | 90               | 50  | 20        | 1.03 | BDL             | BDL  | 2.3         | BDL             | 16              | 1.2  | Nil                            | Nil             |
| Aqua Save                     | BWE-07     | BDL       | 7.05      | 282   | 155 | 20  | 12  | 1200 | 50               | 72  | 22        | BDL  | BDL             | BDL  | 0.6         | BDL             | 29              | 0.39 | Nil                            | Nil             |
| Al-Haider                     | BWE-08     | BDL       | 7.09      | 288   | 158 | 20  | 12  | 150  | 75               | 48  | 22        | BDL  | BDL             | BDL  | <b>19.8</b> | BDL             | BDL             | 0.52 | Nil                            | Nil             |
| Kinley                        | BWE-09     | BDL       | 7.31      | 450   | 248 | 40  | 19  | 180  | 30               | 110 | 22        | 0.08 | BDL             | BDL  | 1.8         | 1               | 41              | BDL  | Nil                            | Nil             |
| Aqua Fina                     | BWE-10     | BDL       | 7.85      | 210   | 116 | BDL | 21  | 85   | 40               | 26  | 18        | BDL  | BDL             | BDL  | 0.9         | BDL             | 45              | BDL  | Nil                            | Nil             |
| Nestle                        | BWE-11     | BDL       | 6.97      | 397   | 218 | 44  | 12  | 150  | 100              | 105 | 12        | BDL  | BDL             | BDL  | 0.4         | BDL             | 30              | 0.33 | Nil                            | Nil             |
| Noble                         | BWE-12     | BDL       | 7.20      | 657   | 361 | 40  | 10  | 150  | 100              | 96  | <b>78</b> | 0.24 | BDL             | BDL  | 4.2         | BDL             | 92              | 1    | Nil                            | Nil             |
| Sunlay                        | BWE-13     | BDL       | 7.06      | 379   | 208 | 20  | 19  | 130  | 120              | 48  | 41        | 0.47 | BDL             | BDL  | 2.3         | 2               | 32              | 0.35 | Nil                            | Nil             |
| Aqua Blue Drops               | BWE-14     | BDL       | 6.76      | 424   | 233 | 20  | 27  | 60   | 40               | 120 | 13        | BDL  | BDL             | BDL  | 4.8         | 0.5             | 1               | 0.27 | Nil                            | Nil             |
| Oslo                          | BWE-15     | BDL       | 6.78      | 415   | 228 | 44  | 15  | 170  | 50               | 100 | 12        | BDL  | BDL             | BDL  | 4.2         | BDL             | 27              | 0.21 | Nil                            | Nil             |
| Naseeb                        | BWE-16     | BDL       | 6.73      | 345   | 190 | 40  | 2   | 110  | 50               | 86  | 21        | BDL  | BDL             | BDL  | 7.7         | 1               | 2               | 0.20 | Nil                            | Nil             |

The highlighted results indicate the concentration level beyond the PSQCA Bottled Water Standards.

January-March, 2015

## PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



|                            |        |     |      |     |     |    |    |     |     |    |            |      |     |     |     |     |    |           |           |     |
|----------------------------|--------|-----|------|-----|-----|----|----|-----|-----|----|------------|------|-----|-----|-----|-----|----|-----------|-----------|-----|
| <b>Water Empire</b>        | BWE-17 | BDL | 6.96 | 286 | 157 | 20 | 12 | 100 | 100 | 12 | 25         | 0.04 | BDL | BDL | 0.5 | 1   | 40 | 0.48      | Nil       | Nil |
| <b>Maple Dew</b>           | BWE-18 | BDL | 6.87 | 318 | 175 | 40 | 7  | 130 | 100 | 36 | 12         | BDL  | BDL | BDL | 0.5 | 1   | 19 | 0.59      | Nil       | Nil |
| <b>Freshle</b>             | BWE-19 | BDL | 7.06 | 453 | 249 | 40 | 24 | 200 | 150 | 24 | 12         | 0.07 | BDL | BDL | 1.0 | 1   | 56 | 0.60      | Nil       | Nil |
| <b>Nectar</b>              | BWE-20 | BDL | 6.97 | 400 | 220 | 40 | 15 | 160 | 140 | 30 | 17         | BDL  | BDL | BDL | 2.3 | 4   | 23 | BDL       | Nil       | Nil |
| <b>Verbena</b>             | BWE-21 | BDL | 6.80 | 473 | 260 | 40 | 12 | 150 | 40  | 84 | 36         | 0.08 | BDL | BDL | 0.6 | 6   | 21 | 0.26      | Nil       | Nil |
| <b>A.R. Water</b>          | BWE-22 | BDL | 6.75 | 31  | 171 | 40 | 2  | 110 | 35  | 72 | 21         | 0.05 | BDL | BDL | BDL | BDL | 17 | BDL       | Nil       | Nil |
| <b>Al-Saudi Water Pack</b> | BWE-22 | BDL | 6.74 | 377 | 207 | 48 | 7  | 150 | 250 | 96 | 11         | BDL  | BDL | BDL | BDL | BDL | 11 | BDL       | Nil       | Nil |
| <b>Deosai</b>              | BWE-24 | BDL | 6.55 | 285 | 157 | 40 | 5  | 120 | 40  | 60 | 14         | 0.13 | BDL | BDL | 0.5 | 5   | 15 | BDL       | Nil       | Nil |
| <b>A-One</b>               | BWE-25 | BDL | 6.56 | 366 | 201 | 40 | 12 | 150 | 40  | 80 | 6          | BDL  | BDL | BDL | BDL | BDL | 8  | BDL       | Nil       | Nil |
| <b>Hydra</b>               | BWE-26 | BDL | 7.49 | 371 | 204 | 40 | 12 | 150 | 160 | 18 | 30         | 0.16 | BDL | BDL | 0.8 | 1   | 7  | BDL       | Nil       | Nil |
| <b>Springley</b>           | BWE-27 | BDL | 7.29 | 522 | 287 | 80 | 17 | 250 | 60  | 24 | 23         | 0.26 | BDL | BDL | 1.2 | 3   | 15 | 0.35      | Nil       | Nil |
| <b>Aqua Hygienic</b>       | BWE-28 | BDL | 7.45 | 272 | 150 | 40 | 7  | 130 | 30  | 72 | 10         | BDL  | BDL | BDL | BDL | BDL | 11 | BDL       | Nil       | Nil |
| <b>Drop Ice</b>            | BWE-29 | BDL | 7.70 | 516 | 264 | 40 | 24 | 200 | 170 | 10 | 40         | 1.16 | BDL | BDL | 0.6 | 4   | 50 | BDL       | <b>04</b> | Nil |
| <b>Murree Sparkletts</b>   | BWE-30 | BDL | 7.72 | 358 | 197 | 40 | 12 | 150 | 140 | 30 | 15         | 0.17 | BDL | BDL | 1.0 | 2   | 6  | BDL       | Nil       | Nil |
| <b>Al-Sana</b>             | BWE-31 | BDL | 7.94 | 490 | 303 | 16 | 7  | 100 | 170 | 40 | <b>102</b> | 3.5  | BDL | BDL | 4.7 | BDL | 28 | <b>32</b> | Nil       | Nil |
| <b>Aqua Dew</b>            | BWE-32 | BDL | 7.34 | 406 | 223 | 48 | 7  | 150 | 90  | 12 | 23         | BDL  | BDL | BDL | 1.4 | 1   | 12 | BDL       | Nil       | Nil |
| <b>Sweet Water</b>         | BWE-33 | BDL | 7.53 | 261 | 144 | 24 | 10 | 100 | 50  | 48 | 20         | BDL  | BDL | BDL | BDL | BDL | 35 | BDL       | Nil       | Nil |
| <b>Klins</b>               | BWE-34 | BDL | 7.36 | 305 | 168 | 40 | 10 | 140 | 70  | 55 | 18         | BDL  | BDL | BDL | 0.3 | BDL | 21 | 5         | Nil       | Nil |
| <b>Aqua Mashmoom</b>       | BWE-35 | BDL | 7.51 | 405 | 223 | 40 | 12 | 150 | 150 | 24 | 15         | 0.2  | BDL | BDL | 1.1 | 2   | 12 | 0.36      | Nil       | Nil |
| <b>Aqua Hygienic</b>       | BWE-36 | BDL | 7.47 | 325 | 179 | 40 | 7  | 130 | 100 | 36 | 28         | 0.49 | BDL | BDL | 1.3 | BDL | 22 | 0.29      | Nil       | Nil |
| <b>Sufi Mineral Water</b>  | BWE-37 | BDL | 7.37 | 357 | 196 | 40 | 12 | 150 | 50  | 80 | 11         | 0.04 | BDL | BDL | BDL | BDL | 19 | BDL       | Nil       | Nil |
| <b>Aqua Pure</b>           | BWE-38 | BDL | 7.34 | 425 | 234 | 40 | 12 | 150 | 65  | 60 | 27         | 0.48 | BDL | BDL | 1.9 | BDL | 59 | 1         | Nil       | Nil |
| <b>Avalon</b>              | BWE-39 | BDL | 7.25 | 359 | 197 | 40 | 5  | 120 | 90  | 55 | 27         | BDL  | BDL | BDL | BDL | BDL | 18 | BDL       | Nil       | Nil |
| <b>Pure Fine</b>           | BWE-40 | BDL | 7.27 | 443 | 244 | 60 | 17 | 220 | 45  | 90 | 5          | BDL  | BDL | BDL | BDL | BDL | 58 | 0.74      | Nil       | Nil |
| <b>Days Pure</b>           | BWE-41 | BDL | 7.46 | 841 | 463 | 40 | 21 | 185 | 215 | 80 | <b>110</b> | 0.45 | BDL | BDL | 4.2 | BDL | 87 | <b>35</b> | Nil       | Nil |

The highlighted results indicate the concentration level beyond the PSQCA Bottled Water Standards.

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## PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



|                     |        |     |      |     |     |     |    |     |     |    |    |      |     |     |     |     |    |      |     |     |
|---------------------|--------|-----|------|-----|-----|-----|----|-----|-----|----|----|------|-----|-----|-----|-----|----|------|-----|-----|
| Aftab Qarshi        | BWE-42 | BDL | 7.41 | 329 | 181 | 40  | 12 | 150 | 30  | 82 | 5  | BDL  | BDL | BDL | BDL | BDL | 14 | 6    | Nil | Nil |
| Effort              | BWE-43 | BDL | 7.37 | 279 | 153 | 36  | 2  | 100 | 30  | 55 | 12 | 0.16 | BDL | BDL | 0.3 | BDL | 15 | 1    | 12  | Nil |
| Aqua Safe           | BWE-44 | BDL | 7.42 | 395 | 217 | 36  | 10 | 130 | 90  | 48 | 36 | 0.05 | BDL | BDL | 1.5 | BDL | 43 | 11   | Nil | Nil |
| Aqua RO 7           | BWE-45 | BDL | 7.42 | 373 | 205 | 36  | 10 | 130 | 80  | 65 | 30 | BDL  | BDL | BDL | BDL | BDL | 24 | 4    | Nil | Nil |
| Aina Aab-e-Haya     | BWE-46 | BDL | 7.27 | 427 | 235 | 50  | 11 | 170 | 80  | 62 | 17 | 0.12 | BDL | BDL | 0.3 | BDL | 44 | 0.92 | Nil | Nil |
| JalPak              | BWE-47 | BDL | 7.38 | 389 | 214 | 40  | 12 | 150 | 20  | 72 | 12 | BDL  | BDL | BDL | BDL | BDL | 52 | 1.   | Nil | Nil |
| Doce                | BWE-48 | BDL | 7.22 | 347 | 191 | 38  | 11 | 140 | 60  | 65 | 20 | 0.08 | BDL | BDL | 0.3 | BDL | 29 | 1    | Nil | Nil |
| Butt                | BWE-49 | BDL | 6.65 | 374 | 206 | 42  | 10 | 146 | 40  | 80 | 22 | BDL  | BDL | BDL | 0.3 | BDL | 26 | 0.39 | 09  | Nil |
| Gourmet Water       | BWE-50 | BDL | 6.73 | 379 | 208 | 40  | 10 | 140 | 90  | 70 | 24 | BDL  | BDL | BDL | 0.4 | BDL | 18 | BDL  | Nil | Nil |
| Dewan Water Express | BWE-51 | BDL | 6.80 | 340 | 187 | 40  | 12 | 150 | 70  | 58 | 14 | 0.08 | BDL | BDL | 0.3 | BDL | 32 | 4    | Nil | Nil |
| KRISCO Water        | BWE-52 | BDL | 6.78 | 344 | 189 | 40  | 12 | 150 | 60  | 60 | 16 | BDL  | BDL | BDL | 0.3 | BDL | 45 | 0.37 | Nil | Nil |
| Jers Water          | BWE-53 | BDL | 6.84 | 366 | 201 | 40  | 12 | 150 | 60  | 70 | 26 | BDL  | BDL | BDL | 0.4 | BDL | 34 | 2    | Nil | Nil |
| Aqua National       | BWE-54 | BDL | 7.20 | 275 | 151 | 40  | 12 | 150 | 150 | 16 | 14 | 0.06 | BDL | BDL | 3.4 | BDL | 2  | 0.80 | Nil | Nil |
| Aqua Mania          | BWE-55 | BDL | 7.59 | 347 | 191 | 40  | 10 | 150 | 25  | 60 | 19 | BDL  | BDL | BDL | 4.5 | 1   | 38 | BDL  | Nil | Nil |
| Hydro Clear         | BWE-56 | BDL | 7.70 | 256 | 141 | 16  | 22 | 50  | 35  | 60 | 34 | BDL  | BDL | BDL | 0.4 | 1   | 2  | BDL  | Nil | Nil |
| Al-Sahar            | BWE-57 | BDL | 7.41 | 370 | 204 | 36  | 12 | 100 | 30  | 96 | 12 | BDL  | BDL | BDL | 9.8 | BDL | 20 | BDL  | Nil | Nil |
| Nash                | BWE-58 | BDL | 7.42 | 252 | 142 | 20  | 5  | 70  | 50  | 60 | 23 | 0.12 | BDL | BDL | 8.3 | 1   | 11 | BDL  | Nil | Nil |
| Orion               | BWE-59 | BDL | 7.22 | 325 | 179 | 40  | 12 | 150 | 50  | 80 | 16 | BDL  | BDL | BDL | 0.9 | 0.5 | 8  | BDL  | Nil | Nil |
| Livon               | BWE-60 | BDL | 7.43 | 332 | 183 | 8   | 7  | 50  | 45  | 85 | 41 | 0.1  | BDL | BDL | 0.5 | BDL | 4  | BDL  | Nil | Nil |
| Mag life            | BWE-61 | BDL | 7.36 | 318 | 175 | 24  | 22 | 150 | 35  | 72 | 8  | BDL  | BDL | BDL | 0.4 | BDL | 19 | BDL  | Nil | Nil |
| Vey                 | BWE-62 | BDL | 7.20 | 302 | 166 | 24  | 12 | 110 | 30  | 72 | 19 | BDL  | BDL | BDL | 6.5 | BDL | 11 | BDL  | Nil | Nil |
| Safe Life           | BWE-63 | BDL | 7.30 | 255 | 140 | 12  | 10 | 70  | 40  | 48 | 15 | 0.15 | BDL | BDL | 0.3 | 1   | 35 | BDL  | Nil | Nil |
| Al-Massafi          | BWE-64 | BDL | 7.33 | 293 | 161 | BDL | 27 | 110 | 60  | 72 | 21 | 0.04 | BDL | BDL | 3.0 | 2   | 5  | BDL  | Nil | Nil |
| Pure 99             | BWE-65 | BDL | 7.20 | 351 | 182 | 40  | 0  | 100 | 65  | 82 | 20 | 0.06 | BDL | BDL | 5.2 | 3   | 14 | BDL  | Nil | Nil |

The highlighted results indicate the concentration level beyond the PSQCA Bottled Water Standards.

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## PCRWR QUARTERLY REPORT-BOTTLED WATER QUALITY



|                     |        |     |      |     |     |    |    |     |     |    |    |      |     |     |     |     |    |     |     |     |
|---------------------|--------|-----|------|-----|-----|----|----|-----|-----|----|----|------|-----|-----|-----|-----|----|-----|-----|-----|
| <b>Al-Habib</b>     | BWE-66 | BDL | 7.28 | 401 | 221 | 20 | 12 | 100 | 100 | 60 | 43 | 0.42 | BDL | BDL | 2.0 | 2   | 36 | BDL | Nil | Nil |
| <b>Zindagi</b>      | BWE-67 | BDL | 7.27 | 352 | 194 | 32 | 12 | 130 | 50  | 80 | 25 | 0.04 | BDL | BDL | 1.3 | BDL | 31 | BDL | Nil | Nil |
| <b>Crystal Maya</b> | BWE-68 | BDL | 6.85 | 250 | 149 | 36 | 13 | 150 | 50  | 60 | 17 | BDL  | BDL | BDL | 0.3 | BDL | 11 | BDL | Nil | Nil |
| <b>Leven</b>        | BWE-69 | BDL | 7.15 | 329 | 187 | 40 | 12 | 150 | 50  | 80 | 15 | BDL  | BDL | BDL | 3.9 | BDL | 18 | BDL | Nil | Nil |
| <b>Culligan</b>     | BWE-70 | BDL | 7.01 | 291 | 160 | 40 | 12 | 150 | 30  | 90 | 8  | BDL  | BDL | BDL | 8.1 | BDL | 3  | BDL | Nil | Nil |
| <b>Dam</b>          | BWE-71 | BDL | 6.59 | 360 | 198 | 40 | 12 | 150 | 50  | 80 | 12 | BDL  | BDL | BDL | 0.4 | 1   | 34 | BDL | Nil | Nil |

NGVS =No Guideline Value Set

BDL = Below Detection Limits

\* Microbiological results have also been verified by IDEXX (Quanti-Tray/2000 USA) and Membrane Filtration (CFU/100ml, 9222-B&D APHA) Methods.

The highlighted results indicate the concentration level beyond the PSQCA Bottled Water Standards.

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