Supplementary Table S2: Water quality analysis of all the samples in the present study

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Sample Details** | **pH** | **Temperature(0C)** | **TDS****(mg/l)** | **Ca****(mg/l)** | **Alkalinity (mg/l)** | **HCO3 (mg/l)** | **CO3 (mg/l)** | **SO4 (mg/l)** | **Cl (mg/l)** |
| 1 | Raya 2, Raya Block | 7.5 | 29.1 | 3071 | 32 | 858 | 806 | 52 | 239 | 611 |
| 2 | Naurangia Jagatiya | 6.7 | 29.3 | 7724 | 128 | 364 | 364 | 0 | 36 | 2939 |
| 3 | Village Usfar , Mathura Block | 7.6 | 29.1 | 3028 | 37 | 234 | 182 | 52 | 5 | 937 |
| 4 | Nagla Jharela, Nandgaon Block | 6.9 | 28.9 | 8916 | 72 | 520 | 520 | 0 | 171 | 2968 |
| 5 | Khuma, Raya Block | 7.7 | 29.1 | 848 | 16 | 611 | 507 | 104 | 210 | 156 |
| 6 | Goverdhan 2 , Goverdhan Block | 7.1 | 29.0 | 4236 | 26 | 65 | 39 | 26 | 394 | 1122 |
| 7 | Farah B.D.O, Farah Block | 7.0 | 28.9 | 5365 | 43 | 650 | 650 | 0 | 161 | 1392 |
| 8 | Beri, Farah Block | 7.2 | 29.2 | 4050 | 46 | 299 | 299 | 0 | 107 | 994 |
| 9 | Falain,Chhatta Block | 7.9 | 28.8 | 2053 | 32 | 520 | 442 | 78 | 146 | 369 |
| 10 | Simana, Raya Block | 6.8 | 28.9 | 9026 | 128 | 819 | 819 | 0 | 544 | 3238 |
| 11 | Mathura Refinery,Mathura | 7.4 | 29.0 | 1658 | 38 | 494 | 494 | 0 | 502 | 412 |
| 12 | Village Palson, Goverdhan Block | 7.0 | 29.0 | 2814 | 135 | 39 | 39 | 0 | 48 | 923 |
| 13 | Aajai Khurd, Chaumauhan Block | 8.3 | 29.0 | 1116 | 11 | 429 | 351 | 78 | 178 | 298 |
| 14 | Akbarpur,Chaumauhan Block | 7.6 | 29.0 | 1647 | 18 | 624 | 520 | 104 | 102 | 511 |
| 15 | Haripur, Nandgaon Block | 7.5 | 29.1 | 1940 | 32 | 481 | 481 | 0 | 1472 | 369 |
| 16 | Sersha, Farah Block | 7.4 | 28.8 | 3462 | 24 | 650 | 650 | 0 | 77 | 909 |
| 17 | Jamalpur, Farah Block | 7.4 | 28.7 | 3736 | 18 | 715 | 715 | 0 | 193 | 1221 |
| 18 | Surir Kalan, Matt Block | 6.7 | 29.1 | 1810 | 21 | 611 | 611 | 0 | 165 | 525 |
| 19 | Village Mukdumpur , Mathura Block | 8.3 | 29.1 | 1449 | 11 | 650 | 634 | 16 | 331 | 199 |
| 20 | Village Neemgaon, Goverdhan Block | 6.6 | 29.1 | 17712 | 882 | 286 | 286 | 0 | 163 | 3862 |
| 21 | Pirsua, Raya Block | 8.3 | 29.2 | 1152 | 8 | 832 | 754 | 78 | 111 | 170 |
| 22 | Behrana, Raya Block | 8.2 | 29.1 | 1484 | 5 | 572 | 572 | 0 | 1375 | 213 |
| 23 | Neemgaon, Matt Block | 6.9 | 29.2 | 5820 | 112 | 598 | 598 | 0 | 274 | 1108 |
| 24 | Bazzna, Naujhil Block | 7.5 | 29.5 | 1240 | 32 | 481 | 481 | 0 | 95 | 241 |
| 25 | Nagla Sajna, Baldeo Block | 6.6 | 28.8 | 10001 | 401 | 403 | 403 | 0 | 262 | 3905 |
| 26 | Village Paintha, Goverdhan Block | 6.7 | 28.9 | 10673 | 657 | 143 | 143 | 0 | 131 | 3550 |
| 27 | Raheempur, Farah Block | 7.3 | 29.0 | 2766 | 24 | 871 | 871 | 0 | 138 | 923 |
| 28 | Yamuna River, Mathura City | 8.6 | 38.1 | 1266 | 75 | 429 | 429 | 0 | 274 | 426 |
| 29 | Jabra, Matt Block | 6.9 | 29.2 | 2121 | 22 | 702 | 702 | 0 | 226 | 454 |
| 30 | Daulatpur, Baldeo Block | 7.5 | 29.1 | 3090 | 35 | 286 | 286 | 0 | 132 | 1164 |
| 31 | Jait, Mathura Block | 7.3 | 29.1 | 3607 | 21 | 780 | 780 | 0 | 454 | 795 |
| 32 | Village Sonkh1, Goverdhan Block | 7.3 | 29.2 | 9708 | 14 | 715 | 715 | 0 | 478 | 2556 |
| 33 | Habeebpur, Baldeo Block | 7.2 | 28.8 | 6088 | 32 | 312 | 312 | 0 | 1236 | 1136 |
| 34 | Baldeo B.D.O, Baldeo Block | 7.9 | 28.9 | 1924 | 6 | 546 | 520 | 26 | 311 | 199 |
| 35 | Hasanpur, Naujhil Block | 7.8 | 29.0 | 1375 | 21 | 572 | 481 | 91 | 132 | 114 |
| 36 | Village Usfar , Mathura Block | 6.5 | 29.2 | 16697 | 297 | 299 | 299 | 0 | 98 | 3096 |
| 37 | Village Lalpur, Goverdhan Block | 7.5 | 29.0 | 8148 | 38 | 559 | 533 | 26 | 990 | 1704 |
| 38 | Gidoh, Nandgaon Block | 7.5 | 32.2 | 8867 | 42 | 273 | 273 | 0 | 75 | 1022 |
| 39 | Makdoompur,Naujhil Block | 7.4 | 29.0 | 11070 | 321 | 221 | 169 | 52 | 207 | 1988 |
| 40 | Shergarh 1,Chhatta Block | 7.8 | 29.1 | 10532 | 80 | 260 | 260 | 0 | 267 | 1278 |
| 41 | Nandgaon, Nandgaon Block | 7.4 | 29.1 | 12365 | 42 | 481 | 481 | 0 | 140 | 2343 |
| 42 | Village Son, Goverdhan Block | 7.3 | 29.1 | 4182 | 19 | 338 | 312 | 26 | 146 | 454 |
| 43 | Matt 1,Matt Block | 7.1 | 29.0 | 7770 | 14 | 481 | 481 | 0 | 119 | 852 |
| 44 | Charmarpur, Baldeo Block | 7.1 | 29.1 | 3025 | 30 | 390 | 390 | 0 | 98 | 568 |
| 45 | Mathura B.D.O, Mathura Block | 7.2 | 28.8 | 3303 | 72 | 286 | 286 | 0 | 529 | 426 |
| 46 | Narisemri,Chaumauhan Block | 7.1 | 29.2 | 4696 | 216 | 221 | 221 | 0 | 533 | 1136 |
| 47 | Nunera, Raya Block | 6.9 | 29.1 | 7438 | 99 | 299 | 299 | 0 | 2238 | 1420 |
| 48 | Koshi, Nandgaon Block | 7.2 | 29.1 | 5718 | 18 | 507 | 507 | 0 | 975 | 1108 |
| 49 | Shahpur, Raya Block | 7.7 | 29.1 | 1387 | 27 | 455 | 403 | 52 | 1064 | 142 |
| 50 | Bijauli, Matt Block | 7.4 | 29.3 | 1037 | 21 | 351 | 351 | 0 | 620 | 170 |
| 51 | Gohari, Chhatta Block | 7.8 | 29.2 | 3821 | 11 | 520 | 520 | 0 | 405 | 554 |
| 52 | Chhatta, Chhatta Block | 7.5 | 29.2 | 5295 | 14 | 715 | 624 | 91 | 538 | 724 |
| 53 | Hothoda, Baldeo Block | 7.1 | 29.1 | 5278 | 143 | 260 | 260 | 0 | 502 | 781 |
| 54 | Paigaon, Chhatta Block | 7.7 | 29.1 | 2769 | 11 | 715 | 715 | 0 | 639 | 355 |
| 55 | Chaumauhan B.D.O,Chaumauhan Block | 6.9 | 29.0 | 10832 | 232 | 676 | 676 | 0 | 854 | 1420 |
| 56 | Nagla Bharau, Raya Block | 7.6 | 29.1 | 2247 | 11 | 650 | 546 | 104 | 509 | 284 |
| 57 | Chhinpari, Naujhil Block | 7.3 | 29.2 | 2656 | 24 | 494 | 494 | 0 | 686 | 213 |
| 58 | Sabji Mandi ,Mathura Block  | 7.1 | 28.9 | 5143 | 99 | 260 | 260 | 0 | 531 | 1093 |
| 59 | Andua, Matt Block | 6.7 | 28.9 | 6683 | 42 | 442 | 442 | 0 | 558 | 1434 |
| 60 | Barsana,Nandgaon Block | 7.2 | 29.1 | 2206 | 37 | 221 | 221 | 0 | 532 | 383 |
| 61 | Tarauli Janvi,Chaumauhan Block | 6.9 | 29.2 | 7901 | 88 | 1027 | 1027 | 0 | 890 | 1974 |
| 62 | Village Palikhera , Mathura Block | 7.2 | 29.3 | 5088 | 32 | 390 | 390 | 0 | 421 | 1150 |
| 63 | Hussainee,Chhatta Block | 7.6 | 29.0 | 1670 | 24 | 546 | 481 | 65 | 556 | 213 |
| 64 | Shehi, Goverdhan Block | 7.5 | 29.1 | 2388 | 16 | 494 | 494 | 0 | 849 | 369 |
| 65 | Satoha, Mathura Block | 7.5 | 29.1 | 4459 | 22 | 429 | 403 | 26 | 967 | 852 |