

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

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final results  
file X75C1000.  
Laminated PSD final results  
on 6/25/93 and  
copied*

| RSP        | File No. | Sample ID       | Blk-corr    | Blk-corr    |
|------------|----------|-----------------|-------------|-------------|
|            |          |                 | 3-EP        | Nicotine    |
|            |          |                 | >= LOD (µg) | >= LOD (µg) |
| JPN1       | 6        | #1 272-R        | N.D.        | 0.03        |
| JPN1       | 7        | #2 272-C        | N.D.        | 0.02        |
| JPN1       | 8        | #3 271-R        | N.D.        | N.D.        |
| JPN1       | 9        | #4 279-R        | N.D.        | 0.03        |
| JPN1       | 12       | #6 159          | N.D.        | 0.04        |
| JPN1       | 13       | #7 271-C        | N.D.        | 0.03        |
| JPN1       | 14       | #8 274-C        | N.D.        | 0.31        |
| JPN1       | 15       | #9 275-R        | N.D.        | 0.05        |
| JPN1       | 17       | #12 150-R       | N.D.        | 0.15        |
| JPN1       | 18       | #13 274-R       | N.D.        | N.D.        |
| JPN1       | 19       | #14 295-C       | N.D.        | 0.04        |
| JPN1       | 20       | #15 257-C       | N.D.        | 0.15        |
| JPN1       | 23       | #16 256-C       | N.D.        | 0.12        |
| JPN1       | 24       | #19 255-R       | N.D.        | 0.02        |
| JPN1       | 25       | #20 255-C       | N.D.        | 0.02        |
| JPN1       | 26       | #21 257-R       | N.D.        | 0.09        |
| JPN1       | 28       | #24 259-C       | N.D.        | 0.04        |
| JPN1       | 29       | #26 256-R       | N.D.        | 0.11        |
| JPN1       | 30       | #27 270-C       | N.D.        | 0.04        |
| JPN1       | 31       | #28 270-R       | N.D.        | 0.06        |
| JPN1       | 34       | #30 259-R       | N.D.        | N.D.        |
| JPN1       | 35       | #31 261-C       | N.D.        | 0.01        |
| JPN1       | 36       | #32 261-R *     | N.D.        | N.D.        |
| JPN1       | 37       | #33 268-C * FB? | N.D.        | 0.07        |
| JPN1       | 44       | #34 279-C *     | N.D.        | 0.05        |
| JPN1       | 45       | #35 266-C *     | 0.02        | 0.29        |
| JPN1       | 46       | #36 269-R *     | N.D.        | 0.10        |
| JPN1       | 47       | #37 268-R *     | 0.02        | 0.44        |
| JPN1       | 50       | #38 121-C *     | 0.03        | 0.61        |
| JPN1       | 51       | #39 121-R *     | N.D.        | 0.15        |
| JPN1       | 52       | #40 145-C *     | 0.09        | 2.37        |
| JPN1       | 53       | #41 142-C       | N.D.        | N.D.        |
| JPN1       | 55       | #42 152-C *     | N.D.        | 0.30        |
| JPN1       | 56       | #43 262-C *     | N.D.        | N.D.        |
| JPN1       | 57       | #144 229-R      | N.D.        | N.D.        |
| JPN1       | 58       | #44 146-R *     | N.D.        | N.D.        |
| JPN1       | 61       | #45 159 *       | N.D.        | N.D.        |
| JPN1       | 62       | #46 146-C       | N.D.        | N.D.        |
| JPN1       | 63       | #47 150-C *     | N.D.        | 0.16        |
| JPN1       | 64       | #48 153-R *     | N.D.        | N.D.        |
| JPN1       | 66       | #49 266-R       | 0.04        | 0.59        |
| JPN1       | 67       | #50 142-R *     | N.D.        | N.D.        |
| JPN1       | 68       | #51 145-R *     | N.D.        | 0.03        |
| JPN1       | 69       | #52 153-C *     | N.D.        | 0.01        |
| JPN1       | 72       | #53 133-C       | N.D.        | 0.18        |
| JPN1       | 73       | #54 152-R       | N.D.        | 0.39        |
| JPN1       | 74       | #55 269-C *     | N.D.        | 0.10        |
| JPN1       | 75       | #56 154-C       | N.D.        | N.D.        |
| <b>LOD</b> |          |                 | <b>0.01</b> | <b>0.01</b> |



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| RSF        | File No. | Sample ID    | Blk-corr    | Blk-corr    |
|------------|----------|--------------|-------------|-------------|
|            |          |              | 3-EP        | Nicotine    |
|            |          |              | >= LOD (µg) | >= LOD (µg) |
| JPN2       | 6        | #57 154-R *  | N.D.        | N.D.        |
| JPN2       | 7        | #59 136-R *  | N.D.        | N.D.        |
| JPN2       | 8        | #61 137-C *  | N.D.        | 0.02        |
| JPN2       | 9        | #63 128-C *  | N.D.        | 0.02        |
| JPN2       | 12       | #64 131-C *  | N.D.        | N.D.        |
| JPN2       | 13       | #65 128-R *  | N.D.        | 0.21        |
| JPN2       | 14       | #66 132-R *  | N.D.        | 0.16        |
| JPN2       | 15       | #67 136-C *  | N.D.        | N.D.        |
| JPN2       | 17       | #68 129-R *  | N.D.        | 0.02        |
| JPN2       | 18       | #69 125-R *  | N.D.        | N.D.        |
| JPN2       | 19       | #70 133-R *  | N.D.        | 0.10        |
| JPN2       | 20       | #71 137-R *  | N.D.        | 0.02        |
| JPN2       | 23       | #72 125-C *  | N.D.        | N.D.        |
| JPN2       | 24       | #73 132-C *  | N.D.        | 0.04        |
| JPN2       | 25       | #74 124-C *  | N.D.        | N.D.        |
| JPN2       | 26       | #76 129-C *  | N.D.        | 0.04        |
| JPN2       | 28       | #77 131-R *  | N.D.        | N.D.        |
| JPN2       | 29       | #78 124-R *  | N.D.        | N.D.        |
| JPN2       | 30       | #79 122-C *  | N.D.        | 0.04        |
| JPN2       | 31       | #80 206-C *  | N.D.        | 0.05        |
| JPN2       | 34       | #81 248-C *  | N.D.        | N.D.        |
| JPN2       | 35       | #82 250-R *  | N.D.        | 0.22        |
| JPN2       | 36       | #83 247-R *  | N.D.        | 0.21        |
| JPN2       | 37       | #84 245-R *  | N.D.        | 0.41        |
| JPN2       | 44       | #85 122-R *  | N.D.        | 0.05        |
| JPN2       | 45       | #86 252-C *  | N.D.        | N.D.        |
| JPN2       | 46       | #87 248-R *  | N.D.        | N.D.        |
| JPN2       | 47       | #88 252-R *  | N.D.        | N.D.        |
| JPN2       | 50       | #89 250-C *  | N.D.        | 0.23        |
| JPN2       | 51       | #90 206-R *  | N.D.        | 0.10        |
| JPN2       | 52       | #91 247-C *  | N.D.        | 0.21        |
| JPN2       | 53       | #92 245-C *  | N.D.        | 0.52        |
| JPN2       | 55       | #93 220-C    | N.D.        | N.D.        |
| JPN2       | 56       | #94 217-C *  | N.D.        | N.D.        |
| JPN2       | 57       | #95 215-R *  | N.D.        | N.D.        |
| JPN2       | 58       | #96 215-C    | N.D.        | N.D.        |
| JPN2       | 61       | #97 209-C *  | N.D.        | 0.03        |
| JPN2       | 62       | #98 218-C *  | N.D.        | N.D.        |
| JPN2       | 63       | #99 211-C *  | N.D.        | 0.02        |
| JPN2       | 64       | #100 218-R   | N.D.        | N.D.        |
| JPN2       | 66       | #101 202-R   | N.D.        | N.D.        |
| JPN2       | 67       | #102 216-R * | N.D.        | 0.26        |
| JPN2       | 68       | #103 211-R * | N.D.        | 0.01        |
| JPN2       | 69       | #104 212-C * | N.D.        | N.D.        |
| JPN2       | 72       | #105 220-R   | N.D.        | 0.12        |
| JPN2       | 73       | #106 216-C   | N.D.        | 0.23        |
| JPN2       | 74       | #107 217-R   | N.D.        | N.D.        |
| JPN2       | 75       | #108 244-R   | N.D.        | N.D.        |
| <b>LOD</b> |          |              | <b>0.01</b> | <b>0.01</b> |

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| RSP        | File No. | Sample ID  | Blk-corr    | Blk-corr    |
|------------|----------|------------|-------------|-------------|
|            |          |            | 3-EP        | Nicotine    |
|            |          |            | >= LOD (µg) | >= LOD (µg) |
| JPN3       | 6        | #109 203-R | N.D.        | 0.02        |
| JPN3       | 7        | #110 209-R | N.D.        | N.D.        |
| JPN3       | 8        | #111 244-C | N.D.        | N.D.        |
| JPN3       | 9        | #112 236-C | N.D.        | N.D.        |
| JPN3       | 12       | #113 222-C | N.D.        | N.D.        |
| JPN3       | 13       | #114 231-R | N.D.        | N.D.        |
| JPN3       | 14       | #115 203-C | N.D.        | N.D.        |
| JPN3       | 15       | #116 212-R | N.D.        | N.D.        |
| JPN3       | 17       | #117 202-C | N.D.        | N.D.        |
| JPN3       | 18       | #118 230   | 0.02        | 1.80        |
| JPN3       | 19       | #119 221-R | N.D.        | N.D.        |
| JPN3       | 20       | #120 235-R | N.D.        | N.D.        |
| JPN3       | 23       | #121 230   | N.D.        | 0.11        |
| JPN3       | 24       | #122 240-C | N.D.        | N.D.        |
| JPN3       | 25       | #123 229-C | N.D.        | N.D.        |
| JPN3       | 26       | #124 235-C | N.D.        | 0.04        |
| JPN3       | 28       | #125 221-C | N.D.        | N.D.        |
| JPN3       | 29       | #126 239-C | N.D.        | 0.05        |
| JPN3       | 30       | #127 231-C | N.D.        | N.D.        |
| JPN3       | 31       | #128 225-R | N.D.        | N.D.        |
| JPN3       | 34       | #129 227-C | 0.01        | 0.14        |
| JPN3       | 35       | #130 239-R | N.D.        | N.D.        |
| JPN3       | 36       | #131 225-C | N.D.        | N.D.        |
| JPN3       | 37       | #132 236-R | N.D.        | N.D.        |
| JPN3       | 45       | #133 291-R | 0.03        | 0.80        |
| JPN3       | 46       | #134 292-C | N.D.        | 0.22        |
| JPN3       | 47       | #136 118-R | N.D.        | N.D.        |
| JPN3       | 48       | #138 117-R | N.D.        | 0.08        |
| JPN3       | 51       | #139 300-R | N.D.        | 0.06        |
| JPN3       | 52       | #140 287-C | N.D.        | N.D.        |
| JPN3       | 53       | #141 227-R | 0.01        | 0.18        |
| JPN3       | 54       | #142 222-R | N.D.        | N.D.        |
| JPN3       | 56       | #143 240-R | N.D.        | N.D.        |
| JPN3       | 57       | #145 103-R | N.D.        | 0.21        |
| JPN3       | 58       | #146 120-R | N.D.        | N.D.        |
| JPN3       | 59       | #147 262-R | N.D.        | N.D.        |
| JPN3       | 62       | #148 120-C | N.D.        | 0.10        |
| JPN3       | 63       | #149 103-C | N.D.        | 0.08        |
| JPN3       | 64       | #150 117-C | N.D.        | 0.17        |
| JPN3       | 65       | #151 291-C | N.D.        | N.D.        |
| JPN3       | 67       | #152 298-C | 0.03        | 0.83        |
| JPN3       | 68       | #135 118-C | N.D.        | N.D.        |
| JPN3       | 69       | #153 167-C | N.D.        | 0.04        |
| JPN3       | 70       | #154 167-R | N.D.        | N.D.        |
| JPN3       | 72       | #155 168-C | 0.04        | 0.69        |
| JPN3       | 73       | #156 168-R | 0.06        | 0.58        |
| JPN3       | 74       | #157 285-C | N.D.        | 0.06        |
| JPN3       | 75       | #158 290-R | N.D.        | N.D.        |
| JPN3       | 76       | #159 289-R | N.D.        | 0.07        |
| <b>LOD</b> |          |            | <b>0.01</b> | <b>0.02</b> |

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

| RSF        | File No. | Sample ID  | Blk-corr    | Blk-corr    |
|------------|----------|------------|-------------|-------------|
|            |          |            | 3-EP        | Nicotine    |
|            |          |            | >= LOD (µg) | >= LOD (µg) |
| JPN4       | 9        | #160 161-R | N.D.        | 0.02        |
| JPN4       | 10       | #161 161-C | N.D.        | N.D.        |
| JPN4       | 11       | #162 162-C | N.D.        | N.D.        |
| JPN4       | 12       | #163 287-R | N.D.        | N.D.        |
| JPN4       | 13       | #164 298-R | 0.04        | 0.25        |
| JPN4       | 16       | #165 283-C | N.D.        | 0.20        |
| JPN4       | 96       | #166 163-C | N.D.        | 0.33        |
| JPN4       | 18       | #167 163-R | N.D.        | 0.26        |
| JPN4       | 19       | #168 293-C | 0.04        | 0.62        |
| JPN4       | 21       | #169 289-C | N.D.        | 0.33        |
| JPN4       | 22       | #170 292-R | N.D.        | N.D.        |
| JPN4       | 23       | #171 293-R | 0.04        | 0.67        |
| JPN4       | 24       | #172 189-C | N.D.        | 0.06        |
| JPN4       | 27       | #173 188-C | N.D.        | N.D.        |
| JPN4       | 28       | #174 195-R | N.D.        | N.D.        |
| JPN4       | 29       | #175 300-C | N.D.        | 0.07        |
| JPN4       | 30       | #176 285-R | N.D.        | 0.03        |
| JPN4       | 32       | #177 290-C | N.D.        | 0.02        |
| JPN4       | 33       | #178 192-C | N.D.        | 0.02        |
| JPN4       | 34       | #179 185-R | N.D.        | N.D.        |
| JPN4       | 35       | #180 200-R | N.D.        | 0.15        |
| JPN4       | 38       | #181 198-R | N.D.        | N.D.        |
| JPN4       | 39       | #182 164-C | N.D.        | 0.07        |
| JPN4       | 40       | #183 164-R | N.D.        | 0.07        |
| JPN4       | 41       | #184 173-C | N.D.        | N.D.        |
| JPN4       | 55       | #185 173-R | N.D.        | N.D.        |
| JPN4       | 56       | #186 283-R | N.D.        | 0.37        |
| JPN4       | 57       | #187 198-C | N.D.        | N.D.        |
| JPN4       | 58       | #188 174-C | N.D.        | N.D.        |
| JPN4       | 61       | #189 174-R | N.D.        | N.D.        |
| JPN4       | 62       | #190 175-C | N.D.        | N.D.        |
| JPN4       | 63       | #191 175-C | N.D.        | N.D.        |
| JPN4       | 64       | #192 177-R | N.D.        | 0.13        |
| JPN4       | 66       | #193 193-R | N.D.        | N.D.        |
| JPN4       | 67       | #194 188-R | N.D.        | N.D.        |
| JPN4       | 68       | #195 187-R | N.D.        | 0.05        |
| JPN4       | 69       | #196 178-C | N.D.        | N.D.        |
| JPN4       | 72       | #197 178-R | N.D.        | N.D.        |
| JPN4       | 73       | #198 177-C | N.D.        | 0.17        |
| JPN4       | 74       | #199 195-C | N.D.        | 0.05        |
| JPN4       | 75       | #200 199-C | N.D.        | N.D.        |
| JPN4       | 77       | #201 186-C | N.D.        | N.D.        |
| JPN4       | 78       | #202 192-R | N.D.        | N.D.        |
| JPN4       | 79       | #203 200-C | N.D.        | 0.15        |
| JPN4       | 80       | #204 162-C | N.D.        | N.D.        |
| JPN4       | 82       | #205 189-R | N.D.        | 0.15        |
| JPN4       | 83       | #206 193-C | N.D.        | N.D.        |
| JPN4       | 84       | #207 185-C | N.D.        | N.D.        |
| JPN4       | 85       | #209 199-R | N.D.        | N.D.        |
| JPN4       | 86       | #210 186-R | N.D.        | N.D.        |
| <b>LOD</b> |          |            | <b>0.02</b> | <b>0.02</b> |



November 4, 1992

Winston-Salem, N.C. 27102  
919-741-5000

Dr. Chris Proctor  
Covington & Burling  
1201 Pennsylvania Ave., N.W.  
P.O. Box 7566  
Washington, D.C. 20044

Dear Chris:

Enclosed are the data from the passive samplers used in the Japanese spousal survey. As you will note, I have supplied data for both nicotine and 3-ethenylpyridine determination. Several comments of an explanatory nature are necessary (as usual) and they follow.

You have two spreadsheets enclosed; one marked "raw" results and one marked "final" results. The raw results include micrograms actually determined on each sample, blank-corrected (Blk-corr) micrograms, and the reporting of only those samples which exceeded the limit of detection (LOD) for each analyte. The final results include only the blank-corrected data which exceeded LOD and are rounded to a reasonable limit of precision. One reason I have given you all the data is that you may choose to incorporate a different definition of LOD than I have used. If so, you should be able to recalculate easily at your leisure.

The limit of detection for both nicotine and 3-EP was determined by the method of Miller & Miller (see enclosed reprint p. 1228; also ref. 31). This entails repeated blank determinations and, for this study, I used the field blanks (designated FB in the Sample ID field in the spreadsheets). Because the value of the blank (and the standard deviation) most always changes from assay to assay, there is a different blank value and LOD value used for each assay. The samples were allocated to four assays and the field blanks were distributed evenly among the assays. As a result, LOD varies slightly across the assays; between 0.01 and 0.02  $\mu\text{g}$  per sample.

The uptake rate of the PSD for 3-EP is 27.8 mL/min and for nicotine is 31.5 mL/min (see reprint Table II). These rates will have to be used in conjunction with the exposure time for each PSD and the mass reported in the spreadsheet to calculate concentrations in  $\mu\text{g}/\text{m}^3$ . For example, the mass nicotine determined in sample #1 272-R is 0.03  $\mu\text{g}$ . Assuming an exact 7-day exposure (10,080 min) yields a sample volume of 0.3175  $\text{m}^3$ . The resulting concentration would then be 0.09  $\mu\text{g}/\text{m}^3$  (0.0945). For statistical purposes, I would carry concentrations to two decimal places; however, for reporting purposes, I might round to only one.

The "Sample ID" field in the spreadsheets contains a complicated assortment of information. I apologize for this, but with limited information on my end I felt I should convey everything to you. As I'll explain shortly, there may be some problems with the identification and tracking of samples (or maybe not). As the scientific advisor to the study, I suppose you get to make that call (in association with Prof. Yano, as necessary).

"We work for smokers."

51062 6840

As you may recall, we pre-labelled all PSDs and storage jars with matched numbers here in Winston-Salem. However, many of the numbered PSDs came back in jars with a different number. These instances are noted in the enclosed set of pages titled "ERRORS." I presume that the number on the PSD is the one to use and it doesn't matter which jar the PSD was returned in. However, we chose to keep track of all this information just in case.

The matching of our PSD number with subject identification came from information written on the jars when they were returned. Therefore, the "Sample ID" column in our data spreadsheets contain both the RJRT-designated sample number and the subject ID number written on the jar. The RJRT sample number is the number immediately following the # sign. Even this leaves the true identity of some subjects in question. For example, file no. 23 on page 1 of our results shows #16 256-C which means that the PSD was labelled #16 (by us) and the jar in which it was returned was marked 256-C (by Yano *et al.*); however, the sample log sheet provided by Prof. Yano (copy enclosed) indicates for monitor #16 "256 C label error, true 260-C." Another instance of a major uncertainty on our part is in file no. 37 on page 1 (#33 268-C \* FB?). Again, the PSD was labelled #33 (by us) and the jar it was returned in was labelled 268-C (by Yano *et al.*); however, the sample log sheet identifies monitor 33 as a blank (subject ID = 0). Based on the nicotine level, I feel that this is truly a subject's sample and not a blank. I strongly suggest that someone who is familiar with the actual conduct of the field sampling go through our data sheet and make sure the proper subject ID is encoded for every sample.

The "\*" in our Sample ID column indicates that this sample was received in the second shipment of samples from Japan. Recall that Prof. Yano brought one box of samples with him and mailed another via surface mail from the airport. The box carried by Prof. Yano was received with sufficient dry ice to ensure the samples were frozen; however, the box which arrived via surface mail several days later had no remaining dry ice and the samples were at room temperature on receipt. Therefore, we have no idea of the thermal history of these samples. Fortunately, there were several field blanks included in this shipment and the results from these blanks do not appear to differ from the other field blanks.

There is another potential error which we documented which could be fatal; however, I'll assume for the moment that it isn't. As noted in our "ERRORS" sheets, a number of PSDs were received without the blue plug (cap) in place in the back of the PSD monitor. Remember that prior to sampling, you and I discussed the need to emphasize to the Japanese researchers that sampling should occur with the blue plug in place. If sampling occurred without the blue plug, then obviously the uptake rates used for converting mass to concentration would be in error. (Without the plug the actual uptake rate would be higher than assumed and, therefore, the true airborne concentration would be lower than the concentration calculated.) I have assumed that the blue plugs popped out during shipment and, if so, there is no cause for concern. However, I suggest you confirm with Yano *et al.* that sampling did indeed occur with the blue plugs in place.

One last oddity to make you aware of. In the "PSD RAW RESULT" spreadsheet, each even-numbered page contains summary information for the blanks that were analyzed as part of the assay reported on the previous page. As a general practice (and precaution) we kept in the

Dr. C. Proctor  
November 4, 1992  
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lab a number of blank PSDs from the same batch of samplers prepared for the Japanese survey. These PSDs were stored in jars in the dark at room temperature, just like I would expect the samples sent to Japan would be stored. These blanks, designated LB (lab blank as opposed to FB, field blank) were divided among the four assays and were analyzed simultaneously with the samples and field blanks. There are two things to note in comparing the FBs with the LBs. First, nicotine values are slightly elevated in the FBs which is not all that surprising. However, 3-EP was detected in virtually all field blanks (surprising) and in none of the lab blanks (not surprising). We have never seen 3-EP in a blank PSD prior to this set of samples, but we have never sent PSDs to Japan and back via airplane either, so this may be real. However, I find it most unlikely that 3-EP (or 4-EP either, they co-elute in our chromatographic system) would be found anywhere in sufficient quantity to migrate across the seals of the storage jars and be sampled at a very low uptake rate and still be detectable. My first thought was that the samplers were stored in an unusual fashion in Japan (outside of their jars, for example); however, this would be a bizarre thing to do. (You might want to ask though.) A second thought is that we have a chromatographic interference that co-elutes with 3/4-EP but is not 3- or 4-EP but still the question remains, "Where did it come from?" To address this possibility, we are attempting to identify this peak by GC-MS; however, the concentrations are so low that it is unlikely we will reach a definitive answer. To address one of my most important concerns, would you please find out if the unused samplers (*i.e.*, the samplers that were returned with subject ID = 0 and were thus used as field blanks) were ever removed from their storage jars or if the jars were even opened at all.

Whatever the situation is with the field blanks (be it 3- or 4-EP or another interference), presumably it is the same for the field samples and the blank correction we have performed is appropriate. Obviously, if we have corrected for an artificially high blank then we are under-reporting the true 3-EP levels from the field. Based on these uncertainties, you may have to consider the 3-EP data as unusable (which is a shame). There are so few detectable 3-EP levels after blank correction that background correction factors, etc. based on 3-EP would be meaningless. However, if we reach some consensus on the validity of the 3-EP interpretation, there is a powerful statement to be made about ETS exposure in Japan even among "exposed" women as measured by this marker compound which is considered by many (us included) to be superior to nicotine (and cotinine).

I know this a lot of "stuff" to digest. Smoke it over and give me a call if (when) you need clarification or want to discuss any particular aspect in more detail.

Best regards,

Michael W. Ogden, Ph.D.  
Senior Staff R&D Chemist

Enclosures

51062 6842

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

| File No. | Sample ID       |           |               | Blk-corr  | Blk-corr      | Blk-corr        | Blk-corr            |
|----------|-----------------|-----------|---------------|-----------|---------------|-----------------|---------------------|
|          |                 | 3-EP (µg) | Nicotine (µg) | 3-EP (µg) | Nicotine (µg) | 3-EP (µg) >=LOD | Nicotine (µg) >=LOD |
| 6        | #1 272-R        | N.D.      | 0.0365        | -0.0066   | 0.0255        | N.D.            | 0.0255              |
| 7        | #2 272-C        | 0.0082    | 0.0333        | 0.0016    | 0.0223        | N.D.            | 0.0223              |
| 8        | #3 271-R        | 0.0084    | 0.0184        | 0.0018    | 0.0074        | N.D.            | N.D.                |
| 9        | #4 279-R        | 0.0078    | 0.0405        | 0.0012    | 0.0295        | N.D.            | 0.0295              |
| 12       | #6 159          | 0.0070    | 0.0520        | 0.0004    | 0.0410        | N.D.            | 0.0410              |
| 13       | #7 271-C        | N.D.      | 0.0368        | -0.0066   | 0.0258        | N.D.            | 0.0258              |
| 14       | #8 274-C        | 0.0190    | 0.3188        | 0.0124    | 0.3078        | N.D.            | 0.3078              |
| 15       | #9 275-R        | 0.0086    | 0.0569        | 0.0020    | 0.0459        | N.D.            | 0.0459              |
| 17       | #12 150-R       | 0.0121    | 0.1606        | 0.0055    | 0.1496        | N.D.            | 0.1496              |
| 18       | #13 274-R       | N.D.      | 0.0171        | -0.0066   | 0.0061        | N.D.            | N.D.                |
| 19       | #14 295-C       | 0.0063    | 0.0522        | -0.0003   | 0.0412        | N.D.            | 0.0412              |
| 20       | #15 257-C       | N.D.      | 0.1643        | -0.0066   | 0.1533        | N.D.            | 0.1533              |
| 23       | #16 256-C       | 0.0119    | 0.1308        | 0.0053    | 0.1198        | N.D.            | 0.1198              |
| 24       | #19 255-R       | 0.0078    | 0.0261        | 0.0012    | 0.0151        | N.D.            | 0.0151              |
| 25       | #20 255-C       | 0.0068    | 0.0318        | 0.0002    | 0.0208        | N.D.            | 0.0208              |
| 26       | #21 257-R       | 0.0074    | 0.1009        | 0.0008    | 0.0899        | N.D.            | 0.0899              |
| 28       | #24 259-C       | N.D.      | 0.0537        | -0.0066   | 0.0427        | N.D.            | 0.0427              |
| 29       | #26 256-R       | 0.0162    | 0.1218        | 0.0096    | 0.1108        | N.D.            | 0.1108              |
| 30       | #27 270-C       | N.D.      | 0.0494        | -0.0066   | 0.0384        | N.D.            | 0.0384              |
| 31       | #28 270-R       | N.D.      | 0.0706        | -0.0066   | 0.0596        | N.D.            | 0.0596              |
| 34       | #30 259-R       | 0.0073    | 0.0098        | 0.0007    | -0.0012       | N.D.            | N.D.                |
| 35       | #31 261-C       | 0.0077    | 0.0212        | 0.0011    | 0.0102        | N.D.            | 0.0102              |
| 36       | #32 261-R *     | N.D.      | 0.0065        | -0.0066   | -0.0045       | N.D.            | N.D.                |
| 37       | #33 268-C * FB? | 0.0145    | 0.0808        | 0.0079    | 0.0698        | N.D.            | 0.0698              |
| 44       | #34 279-C *     | N.D.      | 0.0600        | -0.0066   | 0.0490        | N.D.            | 0.0490              |
| 45       | #35 266-C *     | 0.0225    | 0.2993        | 0.0159    | 0.2883        | 0.0159          | 0.2883              |
| 46       | #36 269-R *     | 0.0163    | 0.1084        | 0.0097    | 0.0974        | N.D.            | 0.0974              |
| 47       | #37 268-R *     | 0.0242    | 0.4483        | 0.0176    | 0.4373        | 0.0176          | 0.4373              |
| 50       | #38 121-C *     | 0.0351    | 0.6234        | 0.0285    | 0.6124        | 0.0285          | 0.6124              |
| 51       | #39 121-R *     | 0.0199    | 0.1626        | 0.0133    | 0.1516        | N.D.            | 0.1516              |
| 52       | #40 145-C *     | 0.1002    | 2.3810        | 0.0936    | 2.3700        | 0.0936          | 2.3700              |
| 53       | #41 142-C       | N.D.      | 0.0105        | -0.0066   | -0.0005       | N.D.            | N.D.                |
| 55       | #42 152-C *     | 0.0141    | 0.3099        | 0.0075    | 0.2989        | N.D.            | 0.2989              |
| 56       | #43 262-C *     | N.D.      | 0.0145        | -0.0066   | 0.0035        | N.D.            | N.D.                |
| 57       | #144 229-R      | N.D.      | 0.0080        | -0.0066   | -0.0030       | N.D.            | N.D.                |
| 58       | #44 146-R *     | N.D.      | 0.0084        | -0.0066   | -0.0026       | N.D.            | N.D.                |
| 61       | #45 159 *       | N.D.      | 0.0173        | -0.0066   | 0.0063        | N.D.            | N.D.                |
| 62       | #46 146-C       | N.D.      | 0.0079        | -0.0066   | -0.0031       | N.D.            | N.D.                |
| 63       | #47 150-C *     | 0.0137    | 0.1684        | 0.0071    | 0.1574        | N.D.            | 0.1574              |
| 64       | #48 153-R *     | 0.0097    | 0.0133        | 0.0031    | 0.0023        | N.D.            | N.D.                |
| 66       | #49 266-R       | 0.0463    | 0.5990        | 0.0397    | 0.5880        | 0.0397          | 0.5880              |
| 67       | #50 142-R *     | N.D.      | 0.0114        | -0.0066   | 0.0004        | N.D.            | N.D.                |
| 68       | #51 145-R *     | 0.0179    | 0.0372        | 0.0113    | 0.0262        | N.D.            | 0.0262              |
| 69       | #52 153-C *     | 0.0122    | 0.0210        | 0.0056    | 0.0100        | N.D.            | 0.0100              |
| 72       | #53 133-C       | 0.0100    | 0.1940        | 0.0034    | 0.1830        | N.D.            | 0.1830              |
| 73       | #54 152-R       | 0.0132    | 0.3971        | 0.0066    | 0.3861        | N.D.            | 0.3861              |
| 74       | #55 269-C *     | 0.0120    | 0.1082        | 0.0054    | 0.0972        | N.D.            | 0.0972              |
| 75       | #56 154-C       | N.D.      | 0.0146        | -0.0066   | 0.0036        | N.D.            | N.D.                |

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

|    |             |        |        |  |  |  |  |
|----|-------------|--------|--------|--|--|--|--|
| 10 | FB #5       | 0.0075 | 0.0139 |  |  |  |  |
| 16 | FB #10      | 0.0090 | 0.0107 |  |  |  |  |
| 21 | FB #11      | 0.0069 | 0.0150 |  |  |  |  |
| 27 | FB #17      | N.D.   | 0.0078 |  |  |  |  |
| 32 | FB #18      | 0.0121 | 0.0100 |  |  |  |  |
| 38 | FB #22      | 0.0088 | 0.0059 |  |  |  |  |
| 48 | FB #23      | N.D.   | 0.0120 |  |  |  |  |
| 54 | FB #25      | N.D.   | 0.0105 |  |  |  |  |
| 59 | FB #29      | 0.0076 | 0.0099 |  |  |  |  |
| 65 | FB #58 *    | 0.0107 | 0.0144 |  |  |  |  |
| 70 | FB #60 *    | 0.0104 | 0.0111 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | FB Average  | 0.0066 | 0.0110 |  |  |  |  |
|    | FB Std Dev  | 0.0045 | 0.0028 |  |  |  |  |
|    | LOD         | 0.0136 | 0.0083 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 76 | Hep/NH3 Blk | N.D.   | 0.0040 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 11 | LB #241     | N.D.   | 0.0069 |  |  |  |  |
| 22 | LB #242     | N.D.   | 0.0065 |  |  |  |  |
| 33 | LB #243     | N.D.   | 0.0040 |  |  |  |  |
| 49 | LB #244     | N.D.   | 0.0060 |  |  |  |  |
| 60 | LB #245     | N.D.   | 0.0069 |  |  |  |  |
| 71 | LB #246     | N.D.   | 0.0059 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | LB Average  | 0.0000 | 0.0060 |  |  |  |  |
|    | LB Std Dev  | 0.0000 | 0.0011 |  |  |  |  |

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

| File No. | Sample ID    | 3-EP ( $\mu\text{g}$ ) | Nicotine ( $\mu\text{g}$ ) | Blk-corr 3-EP ( $\mu\text{g}$ ) | Blk-corr Nicotine ( $\mu\text{g}$ ) | Blk-corr 3-EP $\geq$ LOD ( $\mu\text{g}$ ) | Blk-corr Nicotine $\geq$ LOD ( $\mu\text{g}$ ) |
|----------|--------------|------------------------|----------------------------|---------------------------------|-------------------------------------|--|--|
| 6        | #57 154-R *  | 0.0049                 | 0.0055                     | -0.0077                         | -0.0009                             | N.D.                                       | N.D.   |
| 7        | #59 136-R *  | 0.0052                 | 0.0047                     | -0.0074                         | -0.0017                             | N.D.                                       | N.D.   |
| 8        | #61 137-C *  | 0.0069                 | 0.0285                     | -0.0057                         | 0.0221                              | N.D.                                       | 0.0221   |
| 9        | #63 128-C *  | 0.0069                 | 0.0310                     | -0.0057                         | 0.0246                              | N.D.                                       | 0.0246   |
| 12       | #64 131-C *  | N.D.                   | 0.0014                     | -0.0126                         | -0.0050                             | N.D.                                       | N.D.   |
| 13       | #65 128-R *  | 0.0072                 | 0.2196                     | -0.0054                         | 0.2132                              | N.D.                                       | 0.2132   |
| 14       | #66 132-R *  | 0.0056                 | 0.1621                     | -0.0070                         | 0.1557                              | N.D.                                       | 0.1557   |
| 15       | #67 136-C *  | 0.0046                 | 0.0055                     | -0.0080                         | -0.0009                             | N.D.                                       | N.D.   |
| 17       | #68 129-R *  | 0.0091                 | 0.0291                     | -0.0035                         | 0.0227                              | N.D.                                       | 0.0227   |
| 18       | #69 125-R *  | 0.0051                 | 0.0046                     | -0.0075                         | -0.0018                             | N.D.                                       | N.D.   |
| 19       | #70 133-R *  | 0.0098                 | 0.1108                     | -0.0028                         | 0.1044                              | N.D.                                       | 0.1044   |
| 20       | #71 137-R *  | 0.0051                 | 0.0251                     | -0.0075                         | 0.0187                              | N.D.                                       | 0.0187   |
| 23       | #72 125-C *  | N.D.                   | 0.0034                     | -0.0126                         | -0.0030                             | N.D.                                       | N.D.   |
| 24       | #73 132-C *  | 0.0061                 | 0.0479                     | -0.0065                         | 0.0415                              | N.D.                                       | 0.0415   |
| 25       | #74 124-C *  | 0.0053                 | 0.0069                     | -0.0073                         | 0.0005                              | N.D.                                       | N.D.   |
| 26       | #76 129-C *  | 0.0080                 | 0.0434                     | -0.0046                         | 0.0370                              | N.D.                                       | 0.0370   |
| 28       | #77 131-R *  | 0.0051                 | 0.0025                     | -0.0075                         | -0.0039                             | N.D.                                       | N.D.   |
| 29       | #78 124-R *  | N.D.                   | 0.0054                     | -0.0126                         | -0.0010                             | N.D.                                       | N.D.   |
| 30       | #79 122-C *  | 0.0091                 | 0.0484                     | -0.0035                         | 0.0420                              | N.D.                                       | 0.0420   |
| 31       | #80 206-C *  | 0.0065                 | 0.0602                     | -0.0061                         | 0.0538                              | N.D.                                       | 0.0538   |
| 34       | #81 248-C *  | 0.0047                 | 0.0041                     | -0.0079                         | -0.0023                             | N.D.                                       | N.D.   |
| 35       | #82 250-R *  | 0.0235                 | 0.2276                     | 0.0109                          | 0.2212                              | N.D.                                       | 0.2212   |
| 36       | #83 247-R *  | 0.0166                 | 0.2128                     | 0.0040                          | 0.2064                              | N.D.                                       | 0.2064   |
| 37       | #84 245-R *  | 0.0160                 | 0.4193                     | 0.0034                          | 0.4129                              | N.D.                                       | 0.4129   |
| 44       | #85 122-R *  | 0.0071                 | 0.0586                     | -0.0055                         | 0.0522                              | N.D.                                       | 0.0522   |
| 45       | #86 252-C *  | 0.0059                 | 0.0038                     | -0.0067                         | -0.0026                             | N.D.                                       | N.D.   |
| 46       | #87 248-R *  | 0.0049                 | 0.0059                     | -0.0077                         | -0.0005                             | N.D.                                       | N.D.   |
| 47       | #88 252-R *  | 0.0063                 | 0.0072                     | -0.0063                         | 0.0008                              | N.D.                                       | N.D.   |
| 50       | #89 250-C *  | 0.0138                 | 0.2319                     | 0.0012                          | 0.2255                              | N.D.                                       | 0.2255   |
| 51       | #90 206-R *  | 0.0089                 | 0.1067                     | -0.0037                         | 0.1003                              | N.D.                                       | 0.1003   |
| 52       | #91 247-C *  | 0.0160                 | 0.2164                     | 0.0034                          | 0.2100                              | N.D.                                       | 0.2100   |
| 53       | #92 245-C *  | 0.0090                 | 0.5250                     | -0.0036                         | 0.5186                              | N.D.                                       | 0.5186   |
| 55       | #93 220-C    | N.D.                   | 0.0156                     | -0.0126                         | 0.0092                              | N.D.                                       | N.D.   |
| 56       | #94 217-C *  | N.D.                   | 0.0031                     | -0.0126                         | -0.0033                             | N.D.                                       | N.D.   |
| 57       | #95 215-R *  | 0.0055                 | 0.0075                     | -0.0071                         | 0.0011                              | N.D.                                       | N.D.   |
| 58       | #96 215-C    | 0.0056                 | 0.0076                     | -0.0070                         | 0.0012                              | N.D.                                       | N.D.   |
| 61       | #97 209-C *  | 0.0059                 | 0.0363                     | -0.0067                         | 0.0299                              | N.D.                                       | 0.0299   |
| 62       | #98 218-C *  | N.D.                   | 0.0034                     | -0.0126                         | -0.0030                             | N.D.                                       | N.D.   |
| 63       | #99 211-C *  | 0.0097                 | 0.0241                     | -0.0029                         | 0.0177                              | N.D.                                       | 0.0177   |
| 64       | #100 218-R   | N.D.                   | 0.0033                     | -0.0126                         | -0.0031                             | N.D.                                       | N.D.   |
| 66       | #101 202-R   | N.D.                   | 0.0031                     | -0.0126                         | -0.0033                             | N.D.                                       | N.D.   |
| 67       | #102 216-R * | 0.0202                 | 0.2649                     | 0.0076                          | 0.2585                              | N.D.                                       | 0.2585   |
| 68       | #103 211-R * | 0.0052                 | 0.0183                     | -0.0074                         | 0.0119                              | N.D.                                       | 0.0119   |
| 69       | #104 212-C * | 0.0053                 | 0.0071                     | -0.0073                         | 0.0007                              | N.D.                                       | N.D.   |
| 72       | #105 220-R   | 0.0062                 | 0.1214                     | -0.0064                         | 0.1150                              | N.D.                                       | 0.1150   |
| 73       | #106 216-C   | 0.0191                 | 0.2352                     | 0.0065                          | 0.2288                              | N.D.                                       | 0.2288   |
| 74       | #107 217-R   | N.D.                   | 0.0024                     | -0.0126                         | -0.0040                             | N.D.                                       | N.D.   |
| 75       | #108 244-R   | N.D.                   | 0.0014                     | -0.0126                         | -0.0050                             | N.D.                                       | N.D.   |



1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

| File No. | Sample ID  | 3-EP (µg) | Nicotine (µg) | Blk-corr 3-EP (µg) | Blk-corr Nicotine (µg) | Blk-corr 3-EP >=LOD (µg) | Blk-corr Nicotine >=LOD (µg) |
|----------|------------|-----------|---------------|--------------------|------------------------|--------------------------|------------------------------|
| 6        | #109 203-R | 0.0056    | 0.0338        | -0.0051            | 0.0225                 | N.D.                     | 0.0225                       |
| 7        | #110 209-R | 0.0041    | 0.0145        | -0.0066            | 0.0032                 | N.D.                     | N.D.                         |
| 8        | #111 244-C | N.D.      | 0.0096        | -0.0107            | -0.0017                | N.D.                     | N.D.                         |
| 9        | #112 236-C | N.D.      | 0.0080        | -0.0107            | -0.0033                | N.D.                     | N.D.                         |
| 12       | #113 222-C | N.D.      | 0.0080        | -0.0107            | -0.0033                | N.D.                     | N.D.                         |
| 13       | #114 231-R | 0.0065    | 0.0069        | -0.0042            | -0.0044                | N.D.                     | N.D.                         |
| 14       | #115 203-C | N.D.      | 0.0079        | -0.0107            | -0.0034                | N.D.                     | N.D.                         |
| 15       | #116 212-R | 0.0041    | 0.0090        | -0.0066            | -0.0023                | N.D.                     | N.D.                         |
| 17       | #117 202-C | 0.0046    | 0.0116        | -0.0061            | 0.0003                 | N.D.                     | N.D.                         |
| 18       | #118 230   | 0.0262    | 1.8153        | 0.0155             | 1.8040                 | 0.0155                   | 1.8040                       |
| 19       | #119 221-R | N.D.      | 0.0117        | -0.0107            | 0.0004                 | N.D.                     | N.D.                         |
| 20       | #120 235-R | N.D.      | 0.0070        | -0.0107            | -0.0043                | N.D.                     | N.D.                         |
| 23       | #121 230   | 0.0105    | 0.1199        | -0.0002            | 0.1086                 | N.D.                     | 0.1086                       |
| 24       | #122 240-C | N.D.      | 0.0074        | -0.0107            | -0.0039                | N.D.                     | N.D.                         |
| 25       | #123 229-C | N.D.      | 0.0092        | -0.0107            | -0.0021                | N.D.                     | N.D.                         |
| 26       | #124 235-C | N.D.      | 0.0499        | -0.0107            | 0.0386                 | N.D.                     | 0.0386                       |
| 28       | #125 221-C | N.D.      | 0.0158        | -0.0107            | 0.0045                 | N.D.                     | N.D.                         |
| 29       | #126 239-C | N.D.      | 0.0590        | -0.0107            | 0.0477                 | N.D.                     | 0.0477                       |
| 30       | #127 231-C | 0.0065    | 0.0086        | -0.0042            | -0.0027                | N.D.                     | N.D.                         |
| 31       | #128 225-R | N.D.      | 0.0077        | -0.0107            | -0.0036                | N.D.                     | N.D.                         |
| 34       | #129 227-C | 0.0248    | 0.1536        | 0.0141             | 0.1423                 | 0.0141                   | 0.1423                       |
| 35       | #130 239-R | N.D.      | 0.0078        | -0.0107            | -0.0035                | N.D.                     | N.D.                         |
| 36       | #131 225-C | 0.0050    | 0.0267        | -0.0057            | 0.0154                 | N.D.                     | N.D.                         |
| 37       | #132 236-R | N.D.      | 0.0068        | -0.0107            | -0.0045                | N.D.                     | N.D.                         |
| 45       | #133 291-R | 0.0403    | 0.8104        | 0.0296             | 0.7991                 | 0.0296                   | 0.7991                       |
| 46       | #134 292-C | 0.0117    | 0.2295        | 0.0010             | 0.2182                 | N.D.                     | 0.2182                       |
| 47       | #136 118-R | 0.0064    | 0.0099        | -0.0043            | -0.0014                | N.D.                     | N.D.                         |
| 48       | #138 117-R | 0.0071    | 0.0887        | -0.0036            | 0.0774                 | N.D.                     | 0.0774                       |
| 51       | #139 300-R | 0.0114    | 0.0698        | 0.0007             | 0.0585                 | N.D.                     | 0.0585                       |
| 52       | #140 287-C | N.D.      | 0.0123        | -0.0107            | 0.0010                 | N.D.                     | N.D.                         |
| 53       | #141 227-R | 0.0218    | 0.1884        | 0.0111             | 0.1771                 | 0.0111                   | 0.1771                       |
| 54       | #142 222-R | N.D.      | 0.0118        | -0.0107            | 0.0005                 | N.D.                     | N.D.                         |
| 56       | #143 240-R | N.D.      | 0.0081        | -0.0107            | -0.0032                | N.D.                     | N.D.                         |
| 57       | #145 103-R | 0.0191    | 0.2182        | 0.0084             | 0.2069                 | N.D.                     | 0.2069                       |
| 58       | #146 120-R | N.D.      | 0.0094        | -0.0107            | -0.0019                | N.D.                     | N.D.                         |
| 59       | #147 262-R | N.D.      | 0.0080        | -0.0107            | -0.0033                | N.D.                     | N.D.                         |
| 62       | #148 120-C | 0.0062    | 0.1088        | -0.0045            | 0.0975                 | N.D.                     | 0.0975                       |
| 63       | #149 103-C | 0.0098    | 0.0896        | -0.0009            | 0.0783                 | N.D.                     | 0.0783                       |
| 64       | #150 117-C | 0.0075    | 0.1785        | -0.0032            | 0.1672                 | N.D.                     | 0.1672                       |
| 65       | #151 291-C | 0.0066    | 0.0122        | -0.0041            | 0.0009                 | N.D.                     | N.D.                         |
| 67       | #152 298-C | 0.0440    | 0.8407        | 0.0333             | 0.8294                 | 0.0333                   | 0.8294                       |
| 68       | #135 118-C | 0.0083    | 0.0209        | -0.0024            | 0.0096                 | N.D.                     | N.D.                         |
| 69       | #153 167-C | 0.0073    | 0.0465        | -0.0034            | 0.0352                 | N.D.                     | 0.0352                       |
| 70       | #154 167-R | N.D.      | 0.0061        | -0.0107            | -0.0052                | N.D.                     | N.D.                         |
| 72       | #155 168-C | 0.0463    | 0.7045        | 0.0356             | 0.6932                 | 0.0356                   | 0.6932                       |
| 73       | #156 168-R | 0.0669    | 0.5900        | 0.0562             | 0.5787                 | 0.0562                   | 0.5787                       |
| 74       | #157 285-C | 0.0058    | 0.0677        | -0.0049            | 0.0564                 | N.D.                     | 0.0564                       |
| 75       | #158 290-R | N.D.      | 0.0199        | -0.0107            | 0.0086                 | N.D.                     | N.D.                         |
| 76       | #159 289-R | 0.0070    | 0.0800        | -0.0037            | 0.0687                 | N.D.                     | 0.0687                       |

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

|    |             |        |        |  |  |  |  |
|----|-------------|--------|--------|--|--|--|--|
| 10 | FB #219     | 0.0148 | 0.0102 |  |  |  |  |
| 16 | FB #220     | 0.0177 | 0.0153 |  |  |  |  |
| 21 | FB #221     | 0.0102 | 0.0131 |  |  |  |  |
| 27 | FB #222     | 0.0068 | 0.0078 |  |  |  |  |
| 32 | FB #223     | 0.0105 | 0.0070 |  |  |  |  |
| 38 | FB #224     | 0.0077 | 0.0094 |  |  |  |  |
| 49 | FB #225     | 0.0095 | 0.0077 |  |  |  |  |
| 55 | FB #226     | 0.0099 | 0.0258 |  |  |  |  |
| 60 | FB #227     | 0.0097 | 0.0056 |  |  |  |  |
| 66 | FB #228     | 0.0106 | 0.0114 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | FB Average  | 0.0107 | 0.0113 |  |  |  |  |
|    | FB Std Dev  | 0.0032 | 0.0059 |  |  |  |  |
|    | LOD         | 0.0097 | 0.0176 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 77 | Hep/NH3 Blk | N.D.   | 0.0046 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 11 | LB #253     | N.D.   | 0.0072 |  |  |  |  |
| 22 | LB #254     | N.D.   | 0.0072 |  |  |  |  |
| 33 | LB #255     | N.D.   | 0.0051 |  |  |  |  |
| 44 | LB #256     | N.D.   | 0.0095 |  |  |  |  |
| 50 | LB #257     | N.D.   | 0.0049 |  |  |  |  |
| 61 | LB #258     | N.D.   | 0.0080 |  |  |  |  |
| 71 | LB #259     | N.D.   | 0.0052 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | LB Average  | 0.0000 | 0.0067 |  |  |  |  |
|    | LB Std Dev  | 0.0000 | 0.0017 |  |  |  |  |

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

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| File No. | Sample ID  | 3-EP (µg) | Nicotine (µg) | Blk-corr 3-EP (µg) | Blk-corr Nicotine (µg) | Blk-corr 3-EP >=LOD (µg) | Blk-corr Nicotine >= LOD (µg) |
|----------|------------|-----------|---------------|--------------------|------------------------|--------------------------|-------------------------------|
| 9        | #160 161-R | N.D.      | 0.0310        | -0.0232            | 0.0219                 | N.D.                     | 0.0219                        |
| 10       | #161 161-C | N.D.      | 0.0070        | -0.0232            | -0.0022                | N.D.                     | N.D.                          |
| 11       | #162 162-C | 0.0095    | 0.0154        | -0.0137            | 0.0063                 | N.D.                     | N.D.                          |
| 12       | #163 287-R | N.D.      | 0.0074        | -0.0232            | -0.0018                | N.D.                     | N.D.                          |
| 13       | #164 298-R | 0.0678    | 0.2613        | 0.0446             | 0.2522                 | 0.0446                   | 0.2522                        |
| 16       | #165 283-C | 0.0231    | 0.2114        | -0.0001            | 0.2023                 | N.D.                     | 0.2023                        |
| 96       | #166 163-C | 0.0271    | 0.3376        | 0.0039             | 0.3285                 | N.D.                     | 0.3285                        |
| 18       | #167 163-R | 0.0268    | 0.2667        | 0.0036             | 0.2576                 | N.D.                     | 0.2576                        |
| 19       | #168 293-C | 0.0613    | 0.6318        | 0.0381             | 0.6227                 | 0.0381                   | 0.6227                        |
| 21       | #169 289-C | 0.0147    | 0.3412        | -0.0085            | 0.3321                 | N.D.                     | 0.3321                        |
| 22       | #170 292-R | 0.0088    | 0.0111        | -0.0144            | 0.0020                 | N.D.                     | N.D.                          |
| 23       | #171 293-R | 0.0609    | 0.6793        | 0.0377             | 0.6702                 | 0.0377                   | 0.6702                        |
| 24       | #172 189-C | 0.0120    | 0.0709        | -0.0112            | 0.0618                 | N.D.                     | 0.0618                        |
| 27       | #173 188-C | N.D.      | 0.0053        | -0.0232            | -0.0039                | N.D.                     | N.D.                          |
| 28       | #174 195-R | N.D.      | 0.0082        | -0.0232            | -0.0009                | N.D.                     | N.D.                          |
| 29       | #175 300-C | 0.0200    | 0.0826        | -0.0032            | 0.0735                 | N.D.                     | 0.0735                        |
| 30       | #176 285-R | 0.0098    | 0.0377        | -0.0134            | 0.0286                 | N.D.                     | 0.0286                        |
| 32       | #177 290-C | 0.0110    | 0.0329        | -0.0122            | 0.0238                 | N.D.                     | 0.0238                        |
| 33       | #178 192-C | N.D.      | 0.0316        | -0.0232            | 0.0225                 | N.D.                     | 0.0225                        |
| 34       | #179 185-R | N.D.      | 0.0076        | -0.0232            | -0.0016                | N.D.                     | N.D.                          |
| 35       | #180 200-R | 0.0229    | 0.1551        | -0.0003            | 0.1460                 | N.D.                     | 0.1460                        |
| 38       | #181 198-R | N.D.      | 0.0100        | -0.0232            | 0.0009                 | N.D.                     | N.D.                          |
| 39       | #182 164-C | 0.0172    | 0.0796        | -0.0060            | 0.0705                 | N.D.                     | 0.0705                        |
| 40       | #183 164-R | 0.0130    | 0.0805        | -0.0102            | 0.0714                 | N.D.                     | 0.0714                        |
| 41       | #184 173-C | 0.0078    | 0.0162        | -0.0154            | 0.0071                 | N.D.                     | N.D.                          |
| 55       | #185 173-R | N.D.      | 0.0077        | -0.0232            | -0.0015                | N.D.                     | N.D.                          |
| 56       | #186 283-R | 0.0238    | 0.3754        | 0.0006             | 0.3663                 | N.D.                     | 0.3663                        |
| 57       | #187 198-C | N.D.      | 0.0105        | -0.0232            | 0.0014                 | N.D.                     | N.D.                          |
| 58       | #188 174-C | N.D.      | 0.0169        | -0.0232            | 0.0078                 | N.D.                     | N.D.                          |
| 61       | #189 174-R | 0.0080    | 0.0091        | -0.0152            | 0.0000                 | N.D.                     | N.D.                          |
| 62       | #190 175-C | 0.0084    | 0.0094        | -0.0148            | 0.0003                 | N.D.                     | N.D.                          |
| 63       | #191 175-C | N.D.      | 0.0109        | -0.0232            | 0.0018                 | N.D.                     | N.D.                          |
| 64       | #192 177-R | 0.0108    | 0.1419        | -0.0124            | 0.1328                 | N.D.                     | 0.1328                        |
| 66       | #193 193-R | N.D.      | 0.0070        | -0.0232            | -0.0022                | N.D.                     | N.D.                          |
| 67       | #194 188-R | N.D.      | 0.0059        | -0.0232            | -0.0033                | N.D.                     | N.D.                          |
| 68       | #195 187-R | 0.0090    | 0.0628        | -0.0142            | 0.0537                 | N.D.                     | 0.0537                        |
| 69       | #196 178-C | N.D.      | 0.0045        | -0.0232            | -0.0047                | N.D.                     | N.D.                          |
| 72       | #197 178-R | 0.0085    | 0.0079        | -0.0147            | -0.0013                | N.D.                     | N.D.                          |
| 73       | #198 177-C | 0.0329    | 0.1832        | 0.0097             | 0.1741                 | N.D.                     | 0.1741                        |
| 74       | #199 195-C | 0.0080    | 0.0591        | -0.0152            | 0.0500                 | N.D.                     | 0.0500                        |
| 75       | #200 199-C | N.D.      | 0.0076        | -0.0232            | -0.0016                | N.D.                     | N.D.                          |
| 77       | #201 186-C | N.D.      | 0.0104        | -0.0232            | 0.0013                 | N.D.                     | N.D.                          |
| 78       | #202 192-R | N.D.      | 0.0048        | -0.0232            | -0.0044                | N.D.                     | N.D.                          |
| 79       | #203 200-C | 0.0092    | 0.1622        | -0.0140            | 0.1531                 | N.D.                     | 0.1531                        |
| 80       | #204 162-C | 0.0073    | 0.0140        | -0.0159            | 0.0049                 | N.D.                     | N.D.                          |
| 82       | #205 189-R | 0.0220    | 0.1576        | -0.0012            | 0.1485                 | N.D.                     | 0.1485                        |
| 83       | #206 193-C | N.D.      | 0.0120        | -0.0232            | 0.0029                 | N.D.                     | N.D.                          |
| 84       | #207 185-C | N.D.      | 0.0059        | -0.0232            | -0.0033                | N.D.                     | N.D.                          |
| 85       | #209 199-R | N.D.      | 0.0061        | -0.0232            | -0.0031                | N.D.                     | N.D.                          |
| 86       | #210 186-R | N.D.      | 0.0043        | -0.0232            | -0.0049                | N.D.                     | N.D.                          |

1992 JAPANESE SPOUSAL STUDY - PSD RAW RESULTS

|    |             |        |        |  |  |  |  |
|----|-------------|--------|--------|--|--|--|--|
| 14 | FB #229     | 0.0209 | 0.0099 |  |  |  |  |
| 20 | FB #230     | 0.0154 | 0.0058 |  |  |  |  |
| 25 | FB #231     | 0.0301 | 0.0043 |  |  |  |  |
| 97 | FB #232     | 0.0213 | 0.0099 |  |  |  |  |
| 36 | FB #233     | 0.0296 | 0.0034 |  |  |  |  |
| 42 | FB #234     | 0.0277 | 0.0114 |  |  |  |  |
| 59 | FB #235     | 0.0184 | 0.0074 |  |  |  |  |
| 65 | FB #236     | 0.0172 | 0.0041 |  |  |  |  |
| 70 | FB #237     | 0.0241 | 0.0149 |  |  |  |  |
| 76 | FB #238     | 0.0270 | 0.0204 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | FB Average  | 0.0232 | 0.0092 |  |  |  |  |
|    | FB Std Dev  | 0.0053 | 0.0054 |  |  |  |  |
|    | LOD         | 0.0159 | 0.0162 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 87 | Hep/NH3 Blk | N.D.   | 0.0021 |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
|    |             |        |        |  |  |  |  |
| 15 | LB #260     | N.D.   | 0.0033 |  |  |  |  |
| 26 | LB #261     | N.D.   | 0.0033 |  |  |  |  |
| 37 | LB #262     | N.D.   | 0.0053 |  |  |  |  |
| 54 | LB #263     | N.D.   | 0.0052 |  |  |  |  |
| 60 | LB #264     | N.D.   | 0.0045 |  |  |  |  |
| 71 | LB #265     | N.D.   | 0.0055 |  |  |  |  |
| 81 | LB #266     | N.D.   | 0.0050 |  |  |  |  |
|    | -----       | -----  | -----  |  |  |  |  |
|    | LB Average  | 0.0000 | 0.0046 |  |  |  |  |
|    | LB Std Dev  | 0.0000 | 0.0009 |  |  |  |  |

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

| RSP        | File No. | Sample ID       | Blk-corr    | Blk-corr    |
|------------|----------|-----------------|-------------|-------------|
|            |          |                 | 3-EP        | Nicotine    |
|            |          |                 | >= LOD (µg) | >= LOD (µg) |
| JPN1       | 6        | #1 272-R        | N.D.        | 0.03        |
| JPN1       | 7        | #2 272-C        | N.D.        | 0.02        |
| JPN1       | 8        | #3 271-R        | N.D.        | N.D.        |
| JPN1       | 9        | #4 279-R        | N.D.        | 0.03        |
| JPN1       | 12       | #6 159          | N.D.        | 0.04        |
| JPN1       | 13       | #7 271-C        | N.D.        | 0.03        |
| JPN1       | 14       | #8 274-C        | N.D.        | 0.31        |
| JPN1       | 15       | #9 275-R        | N.D.        | 0.05        |
| JPN1       | 17       | #12 150-R       | N.D.        | 0.15        |
| JPN1       | 18       | #13 274-R       | N.D.        | N.D.        |
| JPN1       | 19       | #14 295-C       | N.D.        | 0.04        |
| JPN1       | 20       | #15 257-C       | N.D.        | 0.15        |
| JPN1       | 23       | #16 256-C       | N.D.        | 0.12        |
| JPN1       | 24       | #19 255-R       | N.D.        | 0.02        |
| JPN1       | 25       | #20 255-C       | N.D.        | 0.02        |
| JPN1       | 26       | #21 257-R       | N.D.        | 0.09        |
| JPN1       | 28       | #24 259-C       | N.D.        | 0.04        |
| JPN1       | 29       | #26 256-R       | N.D.        | 0.11        |
| JPN1       | 30       | #27 270-C       | N.D.        | 0.04        |
| JPN1       | 31       | #28 270-R       | N.D.        | 0.06        |
| JPN1       | 34       | #30 259-R       | N.D.        | N.D.        |
| JPN1       | 35       | #31 261-C       | N.D.        | 0.01        |
| JPN1       | 36       | #32 261-R *     | N.D.        | N.D.        |
| JPN1       | 37       | #33 268-C * FB? | N.D.        | 0.07        |
| JPN1       | 44       | #34 279-C *     | N.D.        | 0.05        |
| JPN1       | 45       | #35 266-C *     | 0.02        | 0.29        |
| JPN1       | 46       | #36 269-R *     | N.D.        | 0.10        |
| JPN1       | 47       | #37 268-R *     | 0.02        | 0.44        |
| JPN1       | 50       | #38 121-C *     | 0.03        | 0.61        |
| JPN1       | 51       | #39 121-R *     | N.D.        | 0.15        |
| JPN1       | 52       | #40 145-C *     | 0.09        | 2.37        |
| JPN1       | 53       | #41 142-C       | N.D.        | N.D.        |
| JPN1       | 55       | #42 152-C *     | N.D.        | 0.30        |
| JPN1       | 56       | #43 262-C *     | N.D.        | N.D.        |
| JPN1       | 57       | #144 229-R      | N.D.        | N.D.        |
| JPN1       | 58       | #44 146-R *     | N.D.        | N.D.        |
| JPN1       | 61       | #45 159 *       | N.D.        | N.D.        |
| JPN1       | 62       | #46 146-C       | N.D.        | N.D.        |
| JPN1       | 63       | #47 150-C *     | N.D.        | 0.16        |
| JPN1       | 64       | #48 153-R *     | N.D.        | N.D.        |
| JPN1       | 66       | #49 266-R       | 0.04        | 0.59        |
| JPN1       | 67       | #50 142-R *     | N.D.        | N.D.        |
| JPN1       | 68       | #51 145-R *     | N.D.        | 0.03        |
| JPN1       | 69       | #52 153-C *     | N.D.        | 0.01        |
| JPN1       | 72       | #53 133-C       | N.D.        | 0.18        |
| JPN1       | 73       | #54 152-R       | N.D.        | 0.39        |
| JPN1       | 74       | #55 269-C *     | N.D.        | 0.10        |
| JPN1       | 75       | #56 154-C       | N.D.        | N.D.        |
| <b>LOD</b> |          |                 | <b>0.01</b> | <b>0.01</b> |

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

| RSF        | File No. | Sample ID    | Blk-corr    | Blk-corr    |
|------------|----------|--------------|-------------|-------------|
|            |          |              | 3-EP        | Nicotine    |
|            |          |              | >= LOD (µg) | >= LOD (µg) |
| JPN2       | 6        | #57 154-R *  | N.D.        | N.D.        |
| JPN2       | 7        | #59 136-R *  | N.D.        | N.D.        |
| JPN2       | 8        | #61 137-C *  | N.D.        | 0.02        |
| JPN2       | 9        | #63 128-C *  | N.D.        | 0.02        |
| JPN2       | 12       | #64 131-C *  | N.D.        | N.D.        |
| JPN2       | 13       | #65 128-R *  | N.D.        | 0.21        |
| JPN2       | 14       | #66 132-R *  | N.D.        | 0.16        |
| JPN2       | 15       | #67 136-C *  | N.D.        | N.D.        |
| JPN2       | 17       | #68 129-R *  | N.D.        | 0.02        |
| JPN2       | 18       | #69 125-R *  | N.D.        | N.D.        |
| JPN2       | 19       | #70 133-R *  | N.D.        | 0.10        |
| JPN2       | 20       | #71 137-R *  | N.D.        | 0.02        |
| JPN2       | 23       | #72 125-C *  | N.D.        | N.D.        |
| JPN2       | 24       | #73 132-C *  | N.D.        | 0.04        |
| JPN2       | 25       | #74 124-C *  | N.D.        | N.D.        |
| JPN2       | 26       | #76 129-C *  | N.D.        | 0.04        |
| JPN2       | 28       | #77 131-R *  | N.D.        | N.D.        |
| JPN2       | 29       | #78 124-R *  | N.D.        | N.D.        |
| JPN2       | 30       | #79 122-C *  | N.D.        | 0.04        |
| JPN2       | 31       | #80 206-C *  | N.D.        | 0.05        |
| JPN2       | 34       | #81 248-C *  | N.D.        | N.D.        |
| JPN2       | 35       | #82 250-R *  | N.D.        | 0.22        |
| JPN2       | 36       | #83 247-R *  | N.D.        | 0.21        |
| JPN2       | 37       | #84 245-R *  | N.D.        | 0.41        |
| JPN2       | 44       | #85 122-R *  | N.D.        | 0.05        |
| JPN2       | 45       | #86 252-C *  | N.D.        | N.D.        |
| JPN2       | 46       | #87 248-R *  | N.D.        | N.D.        |
| JPN2       | 47       | #88 252-R *  | N.D.        | N.D.        |
| JPN2       | 50       | #89 250-C *  | N.D.        | 0.23        |
| JPN2       | 51       | #90 206-R *  | N.D.        | 0.10        |
| JPN2       | 52       | #91 247-C *  | N.D.        | 0.21        |
| JPN2       | 53       | #92 245-C *  | N.D.        | 0.52        |
| JPN2       | 55       | #93 220-C    | N.D.        | N.D.        |
| JPN2       | 56       | #94 217-C *  | N.D.        | N.D.        |
| JPN2       | 57       | #95 215-R *  | N.D.        | N.D.        |
| JPN2       | 58       | #96 215-C    | N.D.        | N.D.        |
| JPN2       | 61       | #97 209-C *  | N.D.        | 0.03        |
| JPN2       | 62       | #98 218-C *  | N.D.        | N.D.        |
| JPN2       | 63       | #99 211-C *  | N.D.        | 0.02        |
| JPN2       | 64       | #100 218-R   | N.D.        | N.D.        |
| JPN2       | 66       | #101 202-R   | N.D.        | N.D.        |
| JPN2       | 67       | #102 216-R * | N.D.        | 0.26        |
| JPN2       | 68       | #103 211-R * | N.D.        | 0.01        |
| JPN2       | 69       | #104 212-C * | N.D.        | N.D.        |
| JPN2       | 72       | #105 220-R   | N.D.        | 0.12        |
| JPN2       | 73       | #106 216-C   | N.D.        | 0.23        |
| JPN2       | 74       | #107 217-R   | N.D.        | N.D.        |
| JPN2       | 75       | #108 244-R   | N.D.        | N.D.        |
| <b>LOD</b> |          |              | <b>0.01</b> | <b>0.01</b> |

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1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

| RSF  | File No. | Sample ID  | Blk-corr    | Blk-corr    |
|------|----------|------------|-------------|-------------|
|      |          |            | 3-EP        | Nicotine    |
|      |          |            | >= LOD (µg) | >= LOD (µg) |
| JPN3 | 6        | #109 203-R | N.D.        | 0.02        |
| JPN3 | 7        | #110 209-R | N.D.        | N.D.        |
| JPN3 | 8        | #111 244-C | N.D.        | N.D.        |
| JPN3 | 9        | #112 236-C | N.D.        | N.D.        |
| JPN3 | 12       | #113 222-C | N.D.        | N.D.        |
| JPN3 | 13       | #114 231-R | N.D.        | N.D.        |
| JPN3 | 14       | #115 203-C | N.D.        | N.D.        |
| JPN3 | 15       | #116 212-R | N.D.        | N.D.        |
| JPN3 | 17       | #117 202-C | N.D.        | N.D.        |
| JPN3 | 18       | #118 230   | 0.02        | 1.80        |
| JPN3 | 19       | #119 221-R | N.D.        | N.D.        |
| JPN3 | 20       | #120 235-R | N.D.        | N.D.        |
| JPN3 | 23       | #121 230   | N.D.        | 0.11        |
| JPN3 | 24       | #122 240-C | N.D.        | N.D.        |
| JPN3 | 25       | #123 229-C | N.D.        | N.D.        |
| JPN3 | 26       | #124 235-C | N.D.        | 0.04        |
| JPN3 | 28       | #125 221-C | N.D.        | N.D.        |
| JPN3 | 29       | #126 239-C | N.D.        | 0.05        |
| JPN3 | 30       | #127 231-C | N.D.        | N.D.        |
| JPN3 | 31       | #128 225-R | N.D.        | N.D.        |
| JPN3 | 34       | #129 227-C | 0.01        | 0.14        |
| JPN3 | 35       | #130 239-R | N.D.        | N.D.        |
| JPN3 | 36       | #131 225-C | N.D.        | N.D.        |
| JPN3 | 37       | #132 236-R | N.D.        | N.D.        |
| JPN3 | 45       | #133 291-R | 0.03        | 0.80        |
| JPN3 | 46       | #134 292-C | N.D.        | 0.22        |
| JPN3 | 47       | #136 118-R | N.D.        | N.D.        |
| JPN3 | 48       | #138 117-R | N.D.        | 0.08        |
| JPN3 | 51       | #139 300-R | N.D.        | 0.06        |
| JPN3 | 52       | #140 287-C | N.D.        | N.D.        |
| JPN3 | 53       | #141 227-R | 0.01        | 0.18        |
| JPN3 | 54       | #142 222-R | N.D.        | N.D.        |
| JPN3 | 56       | #143 240-R | N.D.        | N.D.        |
| JPN3 | 57       | #145 103-R | N.D.        | 0.21        |
| JPN3 | 58       | #146 120-R | N.D.        | N.D.        |
| JPN3 | 59       | #147 262-R | N.D.        | N.D.        |
| JPN3 | 62       | #148 120-C | N.D.        | 0.10        |
| JPN3 | 63       | #149 103-C | N.D.        | 0.08        |
| JPN3 | 64       | #150 117-C | N.D.        | 0.17        |
| JPN3 | 65       | #151 291-C | N.D.        | N.D.        |
| JPN3 | 67       | #152 298-C | 0.03        | 0.83        |
| JPN3 | 68       | #135 118-C | N.D.        | N.D.        |
| JPN3 | 69       | #153 167-C | N.D.        | 0.04        |
| JPN3 | 70       | #154 167-R | N.D.        | N.D.        |
| JPN3 | 72       | #155 168-C | 0.04        | 0.69        |
| JPN3 | 73       | #156 168-R | 0.06        | 0.58        |
| JPN3 | 74       | #157 285-C | N.D.        | 0.06        |
| JPN3 | 75       | #158 290-R | N.D.        | N.D.        |
| JPN3 | 76       | #159 289-R | N.D.        | 0.07        |
| LOD  |          |            | 0.01        | 0.02        |

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

| RSP  | File No. | Sample ID  | Blk-corr          | Blk-corr          |
|------|----------|------------|-------------------|-------------------|
|      |          |            | 3-EP              | Nicotine          |
|      |          |            | >= LOD ( $\mu$ g) | >= LOD ( $\mu$ g) |
| JPN4 | 9        | #160 161-R | N.D.              | 0.02              |
| JPN4 | 10       | #161 161-C | N.D.              | N.D.              |
| JPN4 | 11       | #162 162-C | N.D.              | N.D.              |
| JPN4 | 12       | #163 287-R | N.D.              | N.D.              |
| JPN4 | 13       | #164 298-R | 0.04              | 0.25              |
| JPN4 | 16       | #165 283-C | N.D.              | 0.20              |
| JPN4 | 96       | #166 163-C | N.D.              | 0.33              |
| JPN4 | 18       | #167 163-R | N.D.              | 0.26              |
| JPN4 | 19       | #168 293-C | 0.04              | 0.62              |
| JPN4 | 21       | #169 289-C | N.D.              | 0.33              |
| JPN4 | 22       | #170 292-R | N.D.              | N.D.              |
| JPN4 | 23       | #171 293-R | 0.04              | 0.67              |
| JPN4 | 24       | #172 189-C | N.D.              | 0.06              |
| JPN4 | 27       | #173 188-C | N.D.              | N.D.              |
| JPN4 | 28       | #174 195-R | N.D.              | N.D.              |
| JPN4 | 29       | #175 300-C | N.D.              | 0.07              |
| JPN4 | 30       | #176 285-R | N.D.              | 0.03              |
| JPN4 | 32       | #177 290-C | N.D.              | 0.02              |
| JPN4 | 33       | #178 192-C | N.D.              | 0.02              |
| JPN4 | 34       | #179 185-R | N.D.              | N.D.              |
| JPN4 | 35       | #180 200-R | N.D.              | 0.15              |
| JPN4 | 38       | #181 198-R | N.D.              | N.D.              |
| JPN4 | 39       | #182 164-C | N.D.              | 0.07              |
| JPN4 | 40       | #183 164-R | N.D.              | 0.07              |
| JPN4 | 41       | #184 173-C | N.D.              | N.D.              |
| JPN4 | 55       | #185 173-R | N.D.              | N.D.              |
| JPN4 | 56       | #186 283-R | N.D.              | 0.37              |
| JPN4 | 57       | #187 198-C | N.D.              | N.D.              |
| JPN4 | 58       | #188 174-C | N.D.              | N.D.              |
| JPN4 | 61       | #189 174-R | N.D.              | N.D.              |
| JPN4 | 62       | #190 175-C | N.D.              | N.D.              |
| JPN4 | 63       | #191 175-C | N.D.              | N.D.              |
| JPN4 | 64       | #192 177-R | N.D.              | 0.13              |
| JPN4 | 66       | #193 193-R | N.D.              | N.D.              |
| JPN4 | 67       | #194 188-R | N.D.              | N.D.              |
| JPN4 | 68       | #195 187-R | N.D.              | 0.05              |
| JPN4 | 69       | #196 178-C | N.D.              | N.D.              |
| JPN4 | 72       | #197 178-R | N.D.              | N.D.              |
| JPN4 | 73       | #198 177-C | N.D.              | 0.17              |
| JPN4 | 74       | #199 195-C | N.D.              | 0.05              |
| JPN4 | 75       | #200 199-C | N.D.              | N.D.              |
| JPN4 | 77       | #201 186-C | N.D.              | N.D.              |
| JPN4 | 78       | #202 192-R | N.D.              | N.D.              |
| JPN4 | 79       | #203 200-C | N.D.              | 0.15              |
| JPN4 | 80       | #204 162-C | N.D.              | N.D.              |
| JPN4 | 82       | #205 189-R | N.D.              | 0.15              |
| JPN4 | 83       | #206 193-C | N.D.              | N.D.              |
| JPN4 | 84       | #207 185-C | N.D.              | N.D.              |
| JPN4 | 85       | #209 199-R | N.D.              | N.D.              |
| JPN4 | 86       | #210 186-R | N.D.              | N.D.              |
| LOD  |          |            | 0.02              | 0.02              |