

1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS

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RSP	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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.
LOD			0.01	0.01



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RSF	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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>

**1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS**

RSP	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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>

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RSF	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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.
LOD			0.02	0.02



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	3-EP (µg)	Nicotine (µg)	Blk-corr 3-EP (µg)	Blk-corr Nicotine (µg)	Blk-corr 3-EP (µg)	Blk-corr Nicotine (µg)
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				
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	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				
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	LB Average	0.0000	0.0060				
	LB Std Dev	0.0000	0.0011				

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# 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	#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

10	FB #62 *	0.0056	0.0063				
16	FB #75 *	0.0101	0.0079				
21	FB #137	0.0052	0.0149				
27	FB #211	0.0130	0.0030				
82	FB #212	0.0149	0.0010				
38	FB #213	0.0137	0.0051				
48	FB #214	0.0102	0.0096				
54	FB #215	0.0149		[0.0337]			
59	FB #216	0.0138	0.0046				
65	FB #217	0.0150	0.0051				
70	FB #218	0.0222	0.0062				
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	FB Average	0.0126	0.0064				
	FB Std Dev	0.0048	0.0038				
	LOD	0.0143	0.0115				
76	Hep/NH3 Blk	N.D.	-0.0021				
11	LB #247	N.D.	0.0000				
22	LB #248	N.D.	0.0017				
83	LB #249-REPEAT	N.D.	0.0017				
49	LB #250	N.D.	0.0000				
60	LB #251	N.D.	0.0008				
71	LB #252	N.D.	0.0000				
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	LB Average	0.0000	0.0007				
	LB Std Dev	0.0000	0.0008				

## 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				
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	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				
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	LB Average	0.0000	0.0067				
	LB Std Dev	0.0000	0.0017				

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 (µg) >= LOD	Blk-corr Nicotine (µg) >= LOD
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				
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	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				
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	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 3-EP	Blk-corr 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.
LOD			0.01	0.01



**1992 JAPANESE SPOUSAL STUDY - PSD FINAL RESULTS**

RSF	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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 3-EP	Blk-corr 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

RSF	File No.	Sample ID	Blk-corr 3-EP	Blk-corr 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