# Iodine Nutrition. Iodine Content of Iodized Salt in the US

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Supporting Information

## Excerpt from salt solicitation letter

How much iodine is there in the iodized salt in the US? No one knows. I want to find out and I am seeking your help to get samples from across the US and measure. I do not have any funding to this specifically and do not want to wait to do this until I get funding, so I cannot reimburse you for mailing costs.

There are two levels of participation: although (b) is preferred, I would be happy to have you do (a).

(a) When you next buy a can of iodized salt, please put about 20-25 grams of salt in a zip lock bag. Exclude air as best as possible when sealing the bag and wrap the bag on Al foil on the outside before mailing to me. Please include the following information:

City and store bought
Date bought
Manufacturer or Supplier (Wal-Mart puts their own brand name on it for example)
Product label batch code (often on bottom of can)
Iodine content information (this is often given in an obscure way, 1.5 g is supposed to be a serving, a serving is often labeled to supply, e.g., 45% of RDA (It does not say whose RDA))
Your name and contact information

Mail to:
Sandy Dasgupta
Department of Chemistry
Texas Tech University
Lubbock, TX 79409-1061

(b) Just involves sending two more samples in the same way, one when the can is about half gone and one when the can is almost finished.

Thank you so much

**Table S1. Recommended values of iodine intake in the US**

| Group | Iodine intake (µg/d) |
|---|---|
| Age 0–6 months | 110 (AI) [a] |
| Age 7–12 months | 130 (AI) |
| Age 1–8 yr | 90 (RDA) [a] |
| Age 9–13 yr | 120 (RDA) |
| Age 14 yr and over | 150 (RDA) |
| Pregnant women | 220 (RDA) |
| Lactating women | 290 (RDA) |
| AI, Adequate intake; RDA, recommended daily allowance. | |

[a] The RDA is the intake of a nutrient expected to meet the needs of 97–98% of healthy individuals. The AI is an approximation of the dietary intake of healthy people who are assumed to be getting adequate nutrition. The AI is used when there is not enough evidence to determine the RDA; it always exceeds the RDA

**Table S2. Statewise listing of salt samples analyzed**

| State | Top Sample | Middle Sample | Bottom Sample |
|---|---|---|---|
| AK | 1 | | |
| AR | 1 | 1 | 1 |
| AZ | 1 | | |
| CA | 9 | 4 | 3 |
| CO | 5 | 3 | 1 |
| CT | 1 | 1 | |
| DC | 1 | 1 | 1 |
| DE | 2 | 2 | 1 |
| FL | 1 | 1 | |
| GA | 1 | 1 | |
| IA | 3 | 1 | |
| ID | 1 | 1 | 1 |
| IL | 3 | 2 | 1 |
| IN | 1 | | |
| KS | 1 | 1 | 1 |
| KY | 1 | | |
| MD | 4 | 1 | 1 |
| ME | 1 | | |
| MI | 2 | 2 | 1 |
| MN | | | 1 |
| MO | 1 | | |
| MT | 1 | 1 | |
| NC | 1 | 1 | 1 |
| ND | 1 | | |
| NE | 1 | 1 | |
| NH | 1 | | |
| NJ | 2 | 2 | 2 |
| NM | 1 | | |
| NV | 1 | 1 | |
| NY | 3 | | |
| OH | 1 | 1 | 1 |
| OK | 1 | 1 | 1 |
| OR | 1 | | |
| PA | 1 | | |
| SC | 1 | 1 | 1 |
| TN | 1 | 1 | |
| TX | 17 | 11 | 9 |
| UT | 3 | 2 | |
| VA | 2 | | |
| WA | 4 | 2 | 0 |
| WI | 3 | 3 | 3 |
| Totals | 88 | 50 | 31 |

**Table S3. ICP-MS Operating Conditions and Measurement Parameters**

| | |
|---|---|
| Power: | 1430 W |
| Cool gas: | 13 L/min |
| Aux gas: | 0.7 L/min |
| Neb gas: | 0.92-0.95 L/min$^{-1}$) |
| Spray Chamber Temperature: | 3 $^{o}$C |
| Peristaltic Pump Flow Rate: | 0.8 mL/min |
| Sample and Skimmer Cone: | Nickel |
| Detector mode: | Pulse Counting |
| Operating pressure: | |
| Expansion Chamber Pressure: | 1.9 mbar |
| Analyzer Chamber Pressure: | 3.6 x $10^{-7}$ mbar |
| Nebulizer Back Pressure: | 2.1 bar |
| Software: | Thermo PlasmaLab, version 2.5.5.290 |
| Data Acquisition Parameters: | |
| Mode: | Peakjump |
| Sweeps: | 800 |
| Dwell Time: | 10 ms |
| Mass Separation: | 0.02 amu |
| Elements Monitored: | $^{127}$I, $^{72}$Ge, $^{74}$Ge |

**Salt Donors**

We sincerely thank our donors (in alphabetical order):

**US**
R. Baldwin (KY), L. Bao (CA), A. Basu (CT), G. J. Blanchard (MI), J. Brodbelt (TX), S. D. Brown (DE), M. M. Bushey (TX), C. Cahill (AK), J. Carr (NE), E. Caves (OK), J. Chaudhuri (TX), T. Chow (IL), G. D. Christian (WA), A. Datta (WI), K. B. deCesare (CA), P. Doraiswamy (NV), J. Flahiff (OH), R. A. Flowers (PA), T. Foster (FL), J. S. Fritz (IA), S. Gangopadhyay (MO), W. T. Gautreaux (SC), T. E. Gill (TX), S. R. Goates (UT), C. S. Henry (CO), S. Hieftje (IN), H. H. Hill (WA), W. Hinze (NC), S. Hohnholt (TX), R. T. Kennedy (MI), G. L. Kok (CO), A. Kubatova (ND), S. Kundu (CA), J. Li (MD), H. Liu (CA), B. Lovell (UT), D. Macalady (CO), M. W. Martin (NY), P. H. McMurry (MN), K. Morris (TX), R. R. Naujok (WI), S. Niyogi (IL), C. Palmer (MT), C. J. Patton (CO), I. Ray (WV), V. T. Remcho (OR), D. Rice (ME), F. F. Roberto (ID), J. Ruzicka (WA), G. Samanta (TX), A. Scheeline (IL), W. R. Seitz (NH), D. Sem (WI), R. Sharp (CA), D. Shen (NJ), K. Skogerboe (WA), R. Slingsby (CA), K. Srinivasan (CA) R. Stevenson (CA), X. Su (AR), G. Talanova (MD), G. A. Tarver (Washington DC), B. Temkin (VA), L. Vanatta (TX), G. Vigh (TX), J. Wang (AZ), T. Wang (NJ), R. Weber (GA), B. Wilson (KS), A. Wooley (UT), P. Zhang (TN) and D. Zorn (IA).

**Abroad**
N. Amornthammarong (TH), L. Buydens (NL), H. Van Doorn (NL), S.D. Kolev (AU), U. Krull (CAN), H. K. Lee (SG), I. M. Raimundo (BR), K. Tsunoda (JP), P Worsfold (UK)

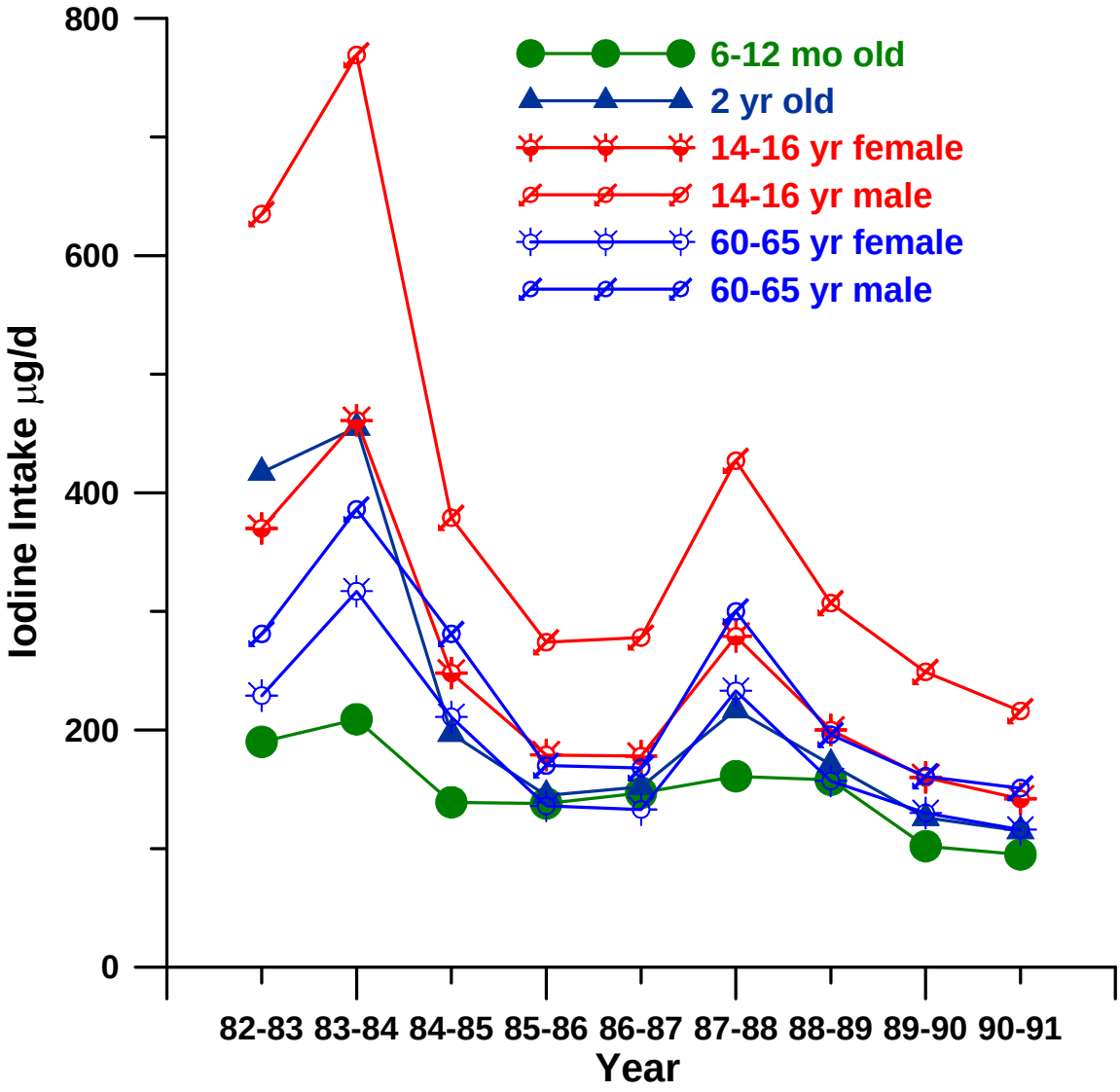


Figure S1. Fall of iodine intake over the years in different age groups. Data from Pennington J. A.; Schoen, S. A. Total diet study: estimated dietary intakes of nutritional elements, 1982–1991. *Int J Vitam Nutr Res.* **1996**, 66, 350–362.

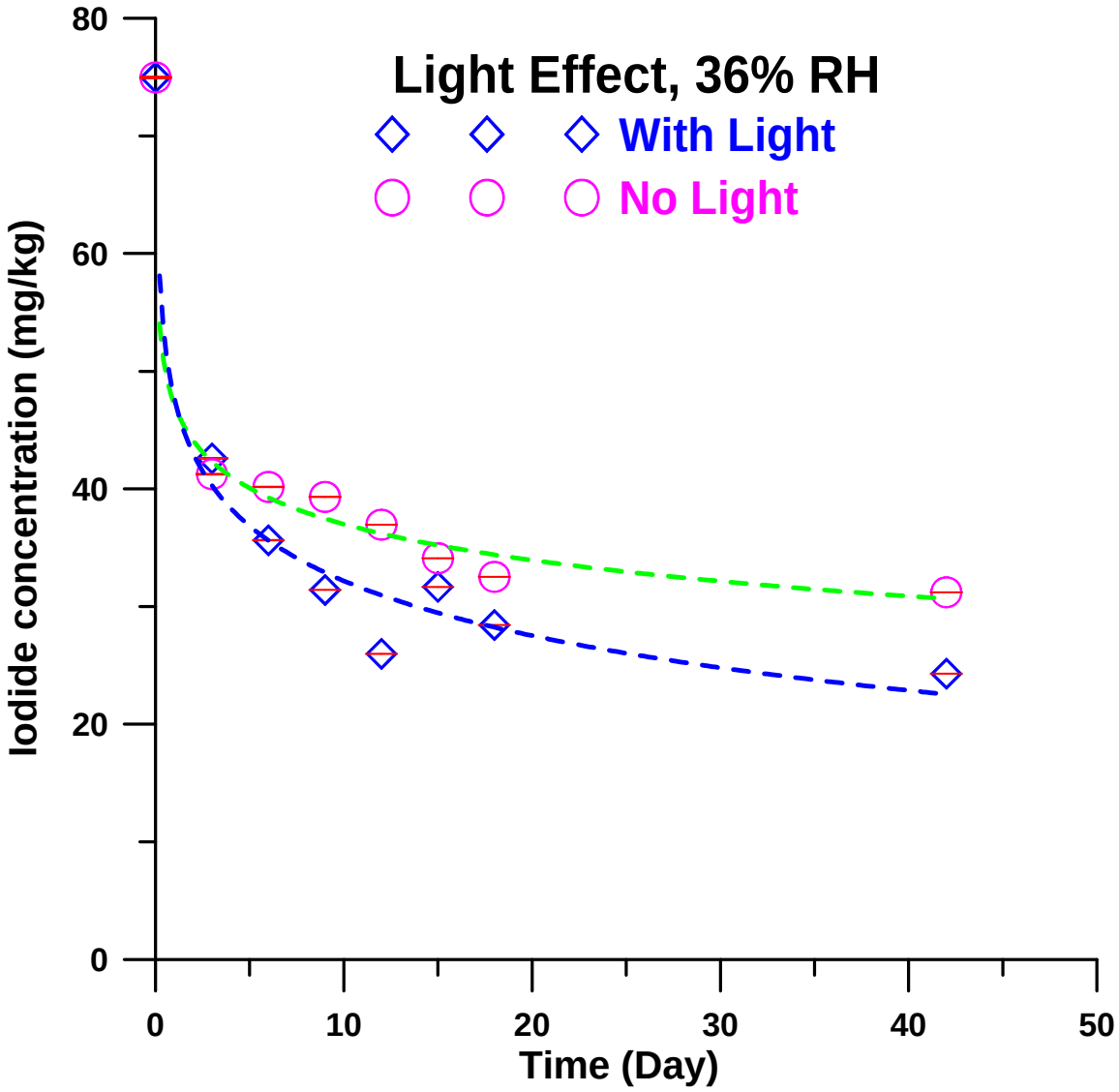


Figure S2. Loss of Iodine with and without exposure to fluorescent room light at 36% RH.

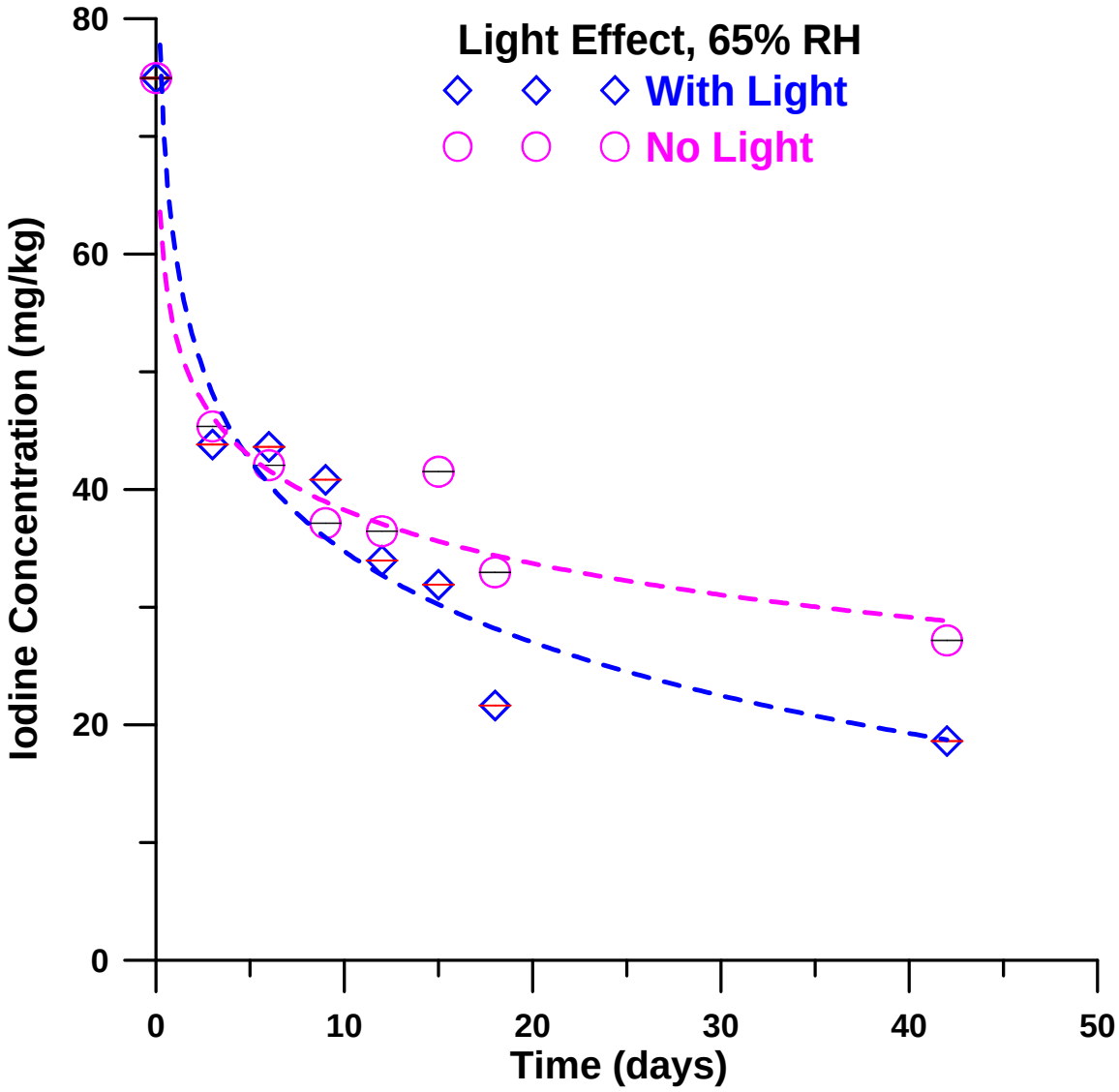


Figure S3. Loss of Iodine with and without exposure to fluorescent room light at 65% RH.

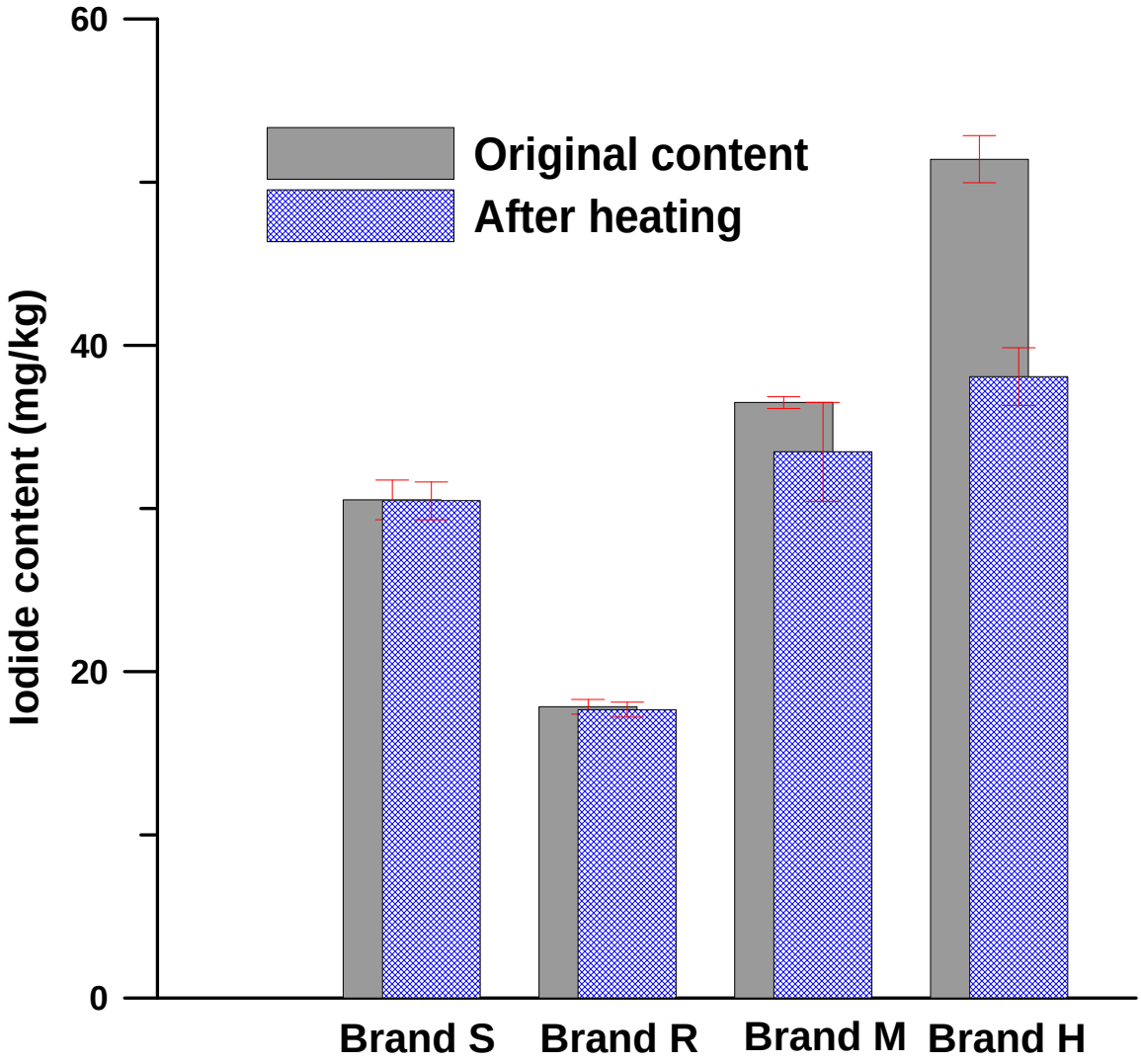


Figure S4. Loss of iodine from different brands of salt upon dry heating for 5 min at 200°C

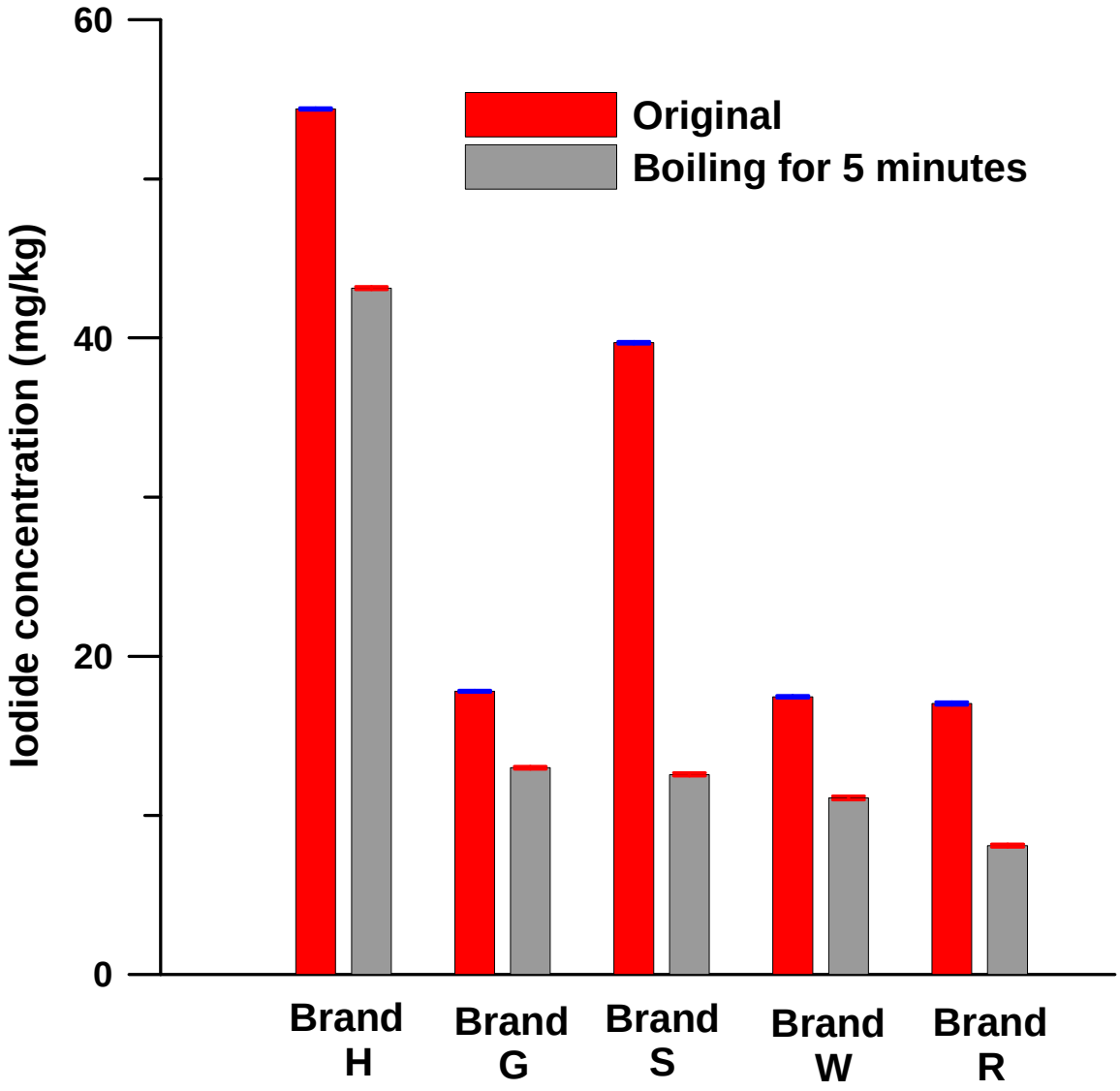


Figure S5. Loss of iodine on boiling a 5% w/v salt solution.