

Interpreting the Sensory and Chemistry Data

The data table shows the results of sensory and chemical analysis on fish samples caught from the area to be re-opened between June 27 and July 20, 2010. Detailed information on the steps taken to analyze the samples can be found in the NOAA-FDA Opening Protocol. In short, samples went through a battery of sensory analyses to ensure there was no detectable odor or taint from petroleum or the dispersant formulations used on the spill. Samples were also analyzed for polycyclic aromatic hydrocarbon (PAH) chemical contaminants using an analytical chemical technique.

Fish Species: 153 fish which represent the commercially and recreationally important species were sampled for this re-opening. These fish species represent the reef fish communities and the pelagic species that occur throughout the area. A representative subset of the samples underwent sensory analyses. Most of the samples subject to sensorial analyses were also subject to chemical analyses, either individually or combined with other specimens to make a composite sample. In all, 146 specimens underwent chemical analysis.

Latitude/Longitude: Coordinates of the precise locations where the fish were caught are given in the second and third columns of the table.

Date: Samples were collected between June 27 and July 20, 2010. The sampling effort for the re-opening did not begin until July 15 and the majority of the samples were caught on or after that date. Some red snapper samples caught on June 27, well prior to this period were also analyzed and all passed the analyses.

Sample Label: The sample label is a unique identifier that follows the sample from the time it is caught until the all processing has been completed.

Sensory Results: Every sample tested passed the battery of sensory analyses, including raw sample odor, cooked odor and cooked taste. The analyses are performed by teams of highly trained sensory technicians. The analyses detect petroleum odor or taint at levels far below what the average person can detect. The sensory technicians were also trained to sense the dispersant formulations used on the Deepwater Horizon oil spill.

Chemical Results: The chemistry data are reported in nanograms per gram (parts per billion: ppb) PAH in edible tissue of finfish collected. Above each compound symbol is a numeric value for the level of concern (LOC) expressed in ppb. Chemistry results below the LOC for that particular compound are indication that the fish sample is safe for human consumption. Results that include the “less than” (<) symbol indicate results that are less than the level at which advanced analytical instrumentation can measure the quantity present. The following table summarizes the LOC’s and the highest level measured in any of the samples analyzed from the area to be re-opened. Note that many of the results are 3 to 4 orders of magnitude below the LOC. The result for benzo(a)pyrene is at least 106 times less than the respective LOC. This is the result that comes closest to the LOC of all the samples.

compound	Level of Concern (ppb)	data table symbol	highest value in fish sampled (ppb)
Naphthalene	32,700.0	NPH	1.30
Fluorene	65,300.0	FLU	0.36
Anthracene/Phenanthrene	490,000.0*	ANT/PHN	<0.89
Pyrene	49,000.0	PYR	<0.34
Fluoranthene	65,300.0	FLA	<0.35
Chrysene	35,000.0	CHR	<0.37
Benzo(k)fluoranthene	3,500.0	BKF	<0.36
Benzo(b)fluoranthene	350.0	BBF	<0.36
Benz(a)anthracene	350.0	BAA	<0.32
Indeno(1,2,3-cd)pyrene	350.0	IDP	<0.32
Dibenz(a,h)anthracene	35.0	DBA	<0.27
Benzo(a)pyrene	35.0	BAP	<0.33

*LOC for Anthracene and Phenanthrene combined.