# FROZEN PROCESSED FISH 

## AND SHELLFISH CONSUMPTION

## IN INSTITUTIONS

## AND

## PUBLIC EATING PLACES

## Survey Methods <br> and <br> Procedures

UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE BUREAU OF COMMERCIAL FISHERIES WASHINGTON 25, D. C.

United States Department of the Interior, Fred A. Seaton, Secretary Fish and Wildlife Service, Arnie J. Suomela, Commissioner Bureau of Commercial Fisheries, Donald L. McKernan, Director

INSTITUTIONS AND PUBLIC EATING PLACES are among the best of all potential markets for frozen fishery products. In recognition of this, a survey was undertaken to obtain information on the consumption of frozen processed fish and shellfish in these establishments.

This study was conducted in ten selected cities by Crossley, S-D Surveys, Inc., of New York City in order to obtain information which could be used by the fishing industry to increase consumer demand for fishery products. The data obtained for each city as a result of this survey, together with an explanation of the methods and procedures used, are published in a series as follows:

Circular 66 - Survey Methods and Procedures Circular 67 - Atlanta, Georgia Circular 68 - Chicago, Illinois Circular 69 - Cleveland, Ohio Circular 70 - Denver, Colorado Circular 71 - Houston, Texas Circular 72 - Los Angeles, California Circular 73 - New York, New York Circular 74 - Omaha, Nebraska Circular 75 - Portland, Oregon Circular 76 - Springfield, Massachusetts

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These publications are available upon request from the Director, Bureau of Commercial Fisheries, U. S. Department of the Interior, Washington 25, D. C.

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## SURVEY METHODS AND PROCEDURES

Prepared in the Division of Industrial Research and Services Branch of Market Development

CIRCULAR 66

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## I. PURPOSE OF STUDY

The over-all purpose of this survey was to obtain data that could be used by the fishing industry to increase consumer demand for fish and shellfish.

In recognition of the importance of the mass feeding industry as a potential market for frozen fishery products this survey was undertaken among institutional and public eating places.

The data collected should be useful in helping processors of frozen fish, shellfish, and portions to adjust their operations and services in order to reduce costs, provide better services, and develop new or expanded markets.

Specifically the objectives of this research were to obtain information on the following within each of ten selected cities:
a. Proportion of establishments using frozen processed sea food in its three forms; fish, shellfish, and portions.
b. Quantity of purchases of frozen processed sea food; by species and amount of prepreparation.
c. Sources of supply of frozen processed sea food.
d. Attitudes toward services of suppliers, quality, condition, packaging, and profitability of frozen processed sea food.
e. Method of cooking frozen processed sea food.
f. Awareness and usage of Government inspected frozen processed sea food.
g. Reasons for not using frozen processed sea food.

## II. METHODOLOGY

A. Definition of Terms

1. Frozen Processed Sea Food

Any sea food (fish or shellfish, fresh, or salt water) which has been processed to some degree and frozen prior to delivery to the eating establishment. Processed, in this sense, means that the sea food has been cleaned, shelled, preccoked, breaded, or prepared in some other way.
2. Frozen Processed Fish

All species of fish which meet the definition of frozen processed sea food. This division excludes shellfish and portion controlled sea foods regardless of species.
3. Frozen Processed Shellfish

All species of shellfish which meet the definition of frozen processed sea food. This division excludes fish items and portion controlled sea foods regardless of species.
4. Portion Controlled Sea Food (Also called "Portions")

Any species of sea food fillets, usually bottom fish, which are frozen into a large mass and then cut into rectangular pieces of equal size. One or more of these pieces or "Portions" usually constitute a serving. Prior to delivery to the establishment "Portions" are sometimes further processed by cooking and/ or breading.
B. Questionnaire Design

The Bureau of Commercial Fisheries supplied Crossley, S-D Surveys, Inc. with a detailed list of specific objectives from which a first draft of the questionnaire was designed. This draft was presented to various processors for their opinions and comments, many of which were incorporated in a second draft. The revised version was then pretested with 57 establishments in Pittsburgh and Toledo. As a result of the test, minor changes were made in the wording of several questions and the sequence was altered to maximize interviewing efficiency.

A copy of the final version of the questionnaire is included at the end of this circular.
C. Sample Design

For the Frozen Processed Fish and Shellfish Study, there were selected ten separate probability samples, each one to represent the public and institutional, nonmilitary, eating places serving hot, solid food for consumption on the premises within the corporate limits of each one of ten cities designated by the Department of the Interior.

Each of the probability samples, except the one for Springfield, Massachusetts, was selected both from a list of establishments of the types described above and from clusters of areas within each city. In Springfield, Massachusetts, an area probability sample only was used. Wherever both list probability and area probability samples were selected, no sampling unit had a double opportunity of being selected because, in effect, all eating places appearing on the lists were eliminated from the universe being sampled through the area clusters. The sampling fraction for each type of eating place was the same, whether it was sampled from the list or from the area coverage.

With respect to the area sampling, it was necessary to divide each city into sampling units (areas made up of clusters of adjacent blocks) expected to contain almost equal numbers of establishments serving hot solid food and belonging to the first subuniverse (restaurants, hotels, bars, etc.). This was done
by plotting on up-to-date city maps a sample of such places, as listed on the most recent directories, and then outlining the boundaries of the areas so that they would enclose equal numbers of plotted establishments and so as to divide the space between two plotted establishments belonging to two different areas approximately equally between the two areas. From the total number of such areas (comprising the whole city), a probability sample of areas was selected and the selected areas were fully canvassed by the field staff.

Below are listed the ten cities used for this study, the number of interviews obtained through the probability area sample, the number of interviews obtained through the probability list sample, and the total number of interviews obtained:

| City | Number of Clusters | Number of Interviews |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Area | List | Total |
| Atlanta, Georgia | 31 | 204 | 39 | 243 |
| Chicago, Illinois | 51 | 764 | 78 | 842 |
| Cleveland, Ohio | 38 | 383 | 27 | 410 |
| Denver, Colorado | 32 | 164 | 52 | 216 |
| Houston, Texas | 32 | 256 | 32 | 288 |
| Los Angeles, California | 48 | 562 | 35 | 597 |
| New York, New York | 71 | 1,131 | 40 | 1,171 |
| Omaha, Nebraska | 31 | 114 | 60 | 174 |
| Portland, Oregon | 30 | 250 | 31 | 281 |
| Springfield, Massachusetts | 30 (1) | 196 | - | 196 |
| Totals | 394 | 4,024 | 394 | 4,418 |

(1) All of city was included but it was divided into 30 assignments.

The universe of all public and institutional, nonmilitary, eating places serving hot solid food (for consumption on the premises) was subdivided, for each city, into four subuniverses, as follows:

1. Eating places serving the public at large and principally or importantly concerned with the service of food for consumption on the premises: restaurants, cafeterias, hotels, bars, etc.
2. Eating places serving particular groups of the general public at the place of their principal activity for consumption there: in plant and in school feeding operations.
3. Eating places serving particular "captive" groups in quasi households: food serving facilities in hospitals, nursing homes, asylums, prisons, and "institutions" generally.
4. Eating places of all other types, located in semiprivate organizations or in establishments open to the general public but not principally nor importantly concerned with the service of food for consumption on the premises: food service in clubs, lunch counters, refreshment stands, drugstores, variety stores, other retail establishments, transportation systems, etc.

In all ten cities except Chicago, Illinois and Cleveland, Ohio, the sampling fraction varied from one subuniverse to the other so that samples adequate for analysis purposes could be expected to be produced for all four subuniverses, even though the number of establishments in the four subuniverses varied greatly. (In Chicago, Illinois and Cleveland, Ohio, the number of establishments in the four subuniverses were such that, by taking the
same sampling fraction in all cases, adequate samples could be expected in all four subuniverses.) Because of the different sampling fractions within each city, the samples had to be reweighted so that all the findings could be shown for each city as a whole. As between cities, however, no reweighting was done, since each city involves a separate study with a separate sample. Therefore, even after reweighting, the "tabulating cases" for each city represent a different proportion of its universe, as shown in the following:


| Atlanta, Georgia | 243 | 431 | $1 / 1.56$ |  |
| :--- | :---: | :---: | :---: | :--- |
| Chicago, Illinois | 842 | 842 | $1 / 7.87$ |  |
| Cleveland, Ohio | 410 | 410 | $1 / 5.00$ |  |
| Denver, Colorado | 216 | 434 | $1 / 2.87$ |  |
| Houston, Texas | 288 | 536 | $1 / 2.47$ |  |
| Los Angeles, California | 597 | 874 | $1 / 4.35$ |  |
| New York, New York | 1,171 | 1,404 | $1 / 12.20$ |  |
| Omaha, Nebraska | 174 | 275 | $1 / 1.65$ |  |
| Portland, Oregon | 281 | 363 | $1 / 2.71$ |  |
| Springfield, Massachusetts | 196 | 221 | $1 / 1.16$ |  |
| Total | 4,418 | - |  | - |

The proportions shown in the last column above represent the net effective proportions reflecting the different sampling rates, the reweighting factors applied to offset these different sampling rates, and the different completion rates achieved. The latter are shown in the following table:

|  | Rate |
| :--- | :---: |
| City | $\%$ |
| Atlanta, Georgia | 96 |
| Chicago, Illinois | 89 |
| Cleveland, Ohio | 80 |
| Denver, Colorado | 87 |
| Houston, Texas | 81 |
| Los Angeles, California | 92 |
| New York, New York | 82 |
| Omaha, Nebraska | 91 |
| Portland, Oregon | 83 |
| Springfield, Massachusetts | 86 |

While the sample was designed so that the "expectation" (based on the available data) would be of a subsample, adequate for separate analysis, for each of four subuniverses, these "expectations" were not always realized. In some cases, the samples produced for certain subuniverses were too small for separate analysis. In such cases, subuniverses No. 1 and No. 4 were merged, and/or subuniverses No. 2 and No. 3, the first two representing, roughly, the "public" eating places and the latter two the "institutional". On this merged basis, adequate samples for analysis were obtained in all cities.

While the list sample was a single-stage sample, the area samples in all cities except Springfield, Massachusetts, were two-stage samples. The first stage was a sampling of areas, as explained above. The second stage was a sampling of the establishments listed by the field staff in their full canvas of the sampled areas. In Springfield, Massachusetts, the area sample, too, was a single-stage sample, because, in the first stage, the
areas selected comprised the whole city, this was necessary because the sample for subuniverse No. 3 (institutions) had to be a 100 percent sample, in order to provide adequate basis for analysis.

Where a two-stage area sample was combined with a singlestage list sample, the sampling fractions for the two stages were so selected as to equal, in combination, the single sarnpling fraction used for the list sample. In general, the sampling fraction for the first stage in the two-stage area sample was determined by the over-all sampling fraction for subuniverse No. 3 (institutions).

In some cases, supplementary sampling was done within certain sampled areas for certain subuniverses to provide more adequate samples. Thus, one subuniverse within one city was in some cases sampled at more than one rate. These different sampling rates, too, were offset by proper reweighting factors that are reflected in the reweighted "Tabulating Cases" reported above.
D. Data Processing

Each completed questionnaire was checked in against a "Call Record Sheet" to insure that the proper sampling procedure was followed.

In addition each interview was reviewed by a trained editor for completeness, accuracy, consistency, and quality.

Codes for all open questions were developed from a representative subsample of interviews. In the coding operation, standard quality controls were utilized to insure a high level of accuracy. For instance, a record was kept of responses coded into the miscellaneous categories with frequent review to determine whether or not a separate category should be added to the code.

All data were punched onto IBM cards and verification checks were performed in accordance with standard tabulating procedures.

Each interview was then given its proper weight by duplication of its punch cards on the basis of the particular sampling rate used in selection of the establishment.

The weighted distribution of responses were then tabulated by machine and percentaged as shown in the Detailed Findings.
E. Reporting

The results of the survey are reported separately for each of ten selected cities.

Four classes and four sizes of establishments were defined for the study and these were used for analysis where the sample size permitted. Where the sample was too small to yield statistically meaningful data, combinations have been made within these indicators.

Below are the basic classifications utilized and in the case of type of operation the most frequently used combination. Combinations within sales volume, where used, are self-explanatory.

## Type of Establishment

## Class I

> Establishments primarily engaged in serving food to the general public. (Restaurants, cafeterias, etc.

## Class II

Establishments serving food to limited groups of people. (Schools, plants, commercial enterprises, etc.

## Class III

Establishments serving food to captive groups of people. (Hospitals, homes for the handicapped, prisons, etc.)

Class IV

Miscellaneous Establishments (Drugstores, lunch counters, stands, clubs, etc.)

Class I and IV

Public Eating Places

Class II and III

Institutions

Annual Sales Volume

Less than \$10,000
\$10,000-39,999
\$40,000-99,999
$\$ 100,000$ and over

Each city's report is presented in three parts:

Summary of Findings

Detailed Findings
Distribution of the Sample
In the Summary of Findings the highlights of the survey are discussed. It will be noted that for selected findings, reference has been made to how the results compare with the nine other cities included in the study.

The detailed findings are presented in the form of percentaged distributions to the responses to various questions asked. While the percentages are based on the weighted number of tabulation cases, the number appearing in parentheses at the head of each column is the actual number of interviews conducted.

Throughout the detailed tabulations a single asterisk (*) has been used to denote that the percentages may add to more than the total or subtotal since some respondents give more than one reply to the question.

Any unusual circumstances relating to the Detailed Findings are explained by footnotes on the tables to which they apply.

With only a few exceptions all of the detailed tables are shown in the same sequence for all ten cities. The exceptions are several cases where the number of respondents was solow that the table had no statistical significance and was therefore not shown.

Tables a through i are a statistical description of the kinds of establishments included in each city sample.

## III. RELIABILITY OF STUDY RESULTS

## A. Sampling Error

Standard Error of the Proportions
For all percentages, the standard error may be estimated by using the formula for simple random sampling (the symbol "d" denotes standard deviation),

$$
\mathrm{dp}=\sqrt{\frac{\mathrm{pq}}{\mathrm{n}}}
$$

and making appropriate adjustments for estimated loss of statistical efficiency of the sample due to clustering and for the gain due to stratification and the finite population factor.

The estimated adjustment factors for all ten cities in this survey are submitted in the following table together with the total number of completed interviews for each city as shown in the section on Sample Design.

|  | Adjustment <br> Factor | Total <br> Number of <br> Interviews |
| :--- | :---: | :---: |
| Atlanta, Georgia | 0.90 | 243 |
| Chicago, Illinois | 1.33 | 842 |
| Cleveland, Ohio | 1.07 | 410 |
| Denver, Colorado | 1.05 | 216 |
| Houston, Texas | 1.03 | 288 |
| Los Angeles, California | 1.19 | 597 |
| New York, New York | 1.44 | 1,171 |
| Omaha, Nebraska | 0.88 | 174 |
| Portland, Oregon | 0.98 | 281 |
| Springfield, Massachusetts | 0.52 | 196 |
| Total |  | 4,418 |

Following are examples of how the table should be used.

The proportion of all public and institutional eating places in Denver, Colorado, that bought frozen processed sea food in the preceding 12 months is 58.8 percent (Denver Table 1 , Column 1 , Line 4); this percentage is based on the total Denver sample of 216 eating places (ibidem, line 1 and table above, line 4). Applying the formula for simple random sampling, we get:


Applying the adjustment factors shown in the table above, line 4 , we estimate the error of the proportion as follows:

$$
d p=1.05 \times .0335=.035175(\text { say } .036)
$$

This means that the chances are, 2 out of 3 , that if all eating places in Denver had been interviewed with the same techniques used in this survey this proportion would have fallen between $.588+.036$ and $.588-.036$, or between 62.4 percent and 55.2 percent.

The above procedure is followed when the "base" for the percentage whose standarderror is desired is the same as the total number of interviews according to the last column in the table above. In other cases, the following slightly modified procedure is followed.

The proportion of all public and institutional eating places in Denver, Colorado, with annual sales volume of less than $\$ 10,000$, that bought frozen processed sea food in the preceding 12 months is 39.6 percent (Denver Table 1 , column 4, line 4); this percentage is based on a Denver subsample of 87 eating places (Ibidem, line 1), which is not the total Denver sample of 216 places (see table above, line 4). First we must adjust the percentage to express it as a proportion of the total sample, as follows:

$$
\begin{aligned}
& 39.6 \% \times 87 \text { (size of subsample) }=34.452 \\
& 34.452 \div 216 \text { (size of total sample) }=16.0 \%
\end{aligned}
$$

Applying the formula for simple random sampling:


Applying the adjustment factor from the first column of the preceding table above, line 4 ,

$$
d p=1.05 \times .02494=.026187 \text { (say } .0262 \text { ) }
$$

This is the standard error as a proportion of the total sample and must be converted back to represent a proportion of the subsample.

```
.0262 x 216 (size of total sample) = 5.6592
5.6592\div87(size of subsample) =.06505 (say .065)
```

This means that chances are, two out of three, that if all eating places in Denver had been interviewed with the same techniques used in this survey, this proportion would have fallen between $.396+.065$ and $.396-.065$, or between 33.1 percent and 46.1 percent.

Below are the standard errors of the proportion estimated for the corresponding percentages in all ten cities:

| Standard Error of the Proportion |  |
| :---: | :---: |
|  | Percentage of |
|  | Eating Places |
| With Annual |  |
| Percentage of | Sales Volume |
| All Eating | Under $\$ 10,000$ |
| Places That | That Bought |
| Bought Frozen | Frozen |
| Processed | Processed |
| Sea Food | Sea Food |

Atlanta, Georgia
.026
.055
Chicago, Illinois
.022
. 048
Cleveland, Ohio
.025
.029
Denver, Colorado
.036 . 065
Houston, Texas
Los Angeles, California
New York, New York
.030
.063
.024
.037
Omaha, Nebraska
.018
. 021
Portland, Oregon
.030
.072
Springfield, Massachusetts
.029
.043
.019
.037

Standard Errors of the Mean or Total
The standard errors of the quantities shown in certain tables (as for instance, total quantity purchased of a particular item of fish or shellfish) are naturally larger than the standard errors of the proportions. For this reason, and because response error may be high--when respondents recollect quantities of items purchased--standard errors of the quantities have not been computed.

It should be noted, also, that in computing standard errors of the quantities, the adjustment factors listed above cannot be applied. It is necessary to ascertain adjustment factors for each individual fish or shellfish item purchased, inasmuch as the number of establishments purchasing each item will vary with the individual case.

## B. Nonresponse Error

Nonresponse error occurs when an establishment falls in a probability sample, but no interview can be completed at the establishment. To the extent that nonrespondents are different from respondents the survey results might have been altered had the nonrespondents been included in the interviewed sample.

The completion rate for each city is given in Section II-C, Sample Design. It varies from 80 percent in Cleveland to 96 percent in Atlanta. These completion rates are relatively high indicating that nonresponse error has been held to a minimum.

As a standard part of field procedure, repeated call backs were made to those establishments when no interview was completed at the time of the first visit. These procedures substantially reduced the number of noncompleted interviews, and lowered the possibility of nonresponse error.

Where no interview was completed after repeated call backs, several factors were operating:

1. Absence of the proprietor or a qualified representative, during the period of the field work.
2. Preoccupation of the proprietor with the Christmas rush, year-end inventories, or clerical work.
3. In the case of some schools, closing of the schools for vacation during part of the period of field work.
4. Lack of interest in the study, on the part of some proprietors. Some establishments served only a minimum of hot solid fond, and seldom if ever used frozen processed sea food.

Nonresponse error is one of a number of factors affecting the statistical significance of the findings. It is not taken into account in the computation of tolerances, discussed in Section III-A, Sampling Error.

## C. Response Errors

While not measurable, response errors are likely to exist where answers to questions are of a reasoning or quantitative nature. Such errors may be defined as those introduced into a study when respondents consciously or unconsciously give superficial and/or incomplete answers to questions which require reasons or numerical answers.

Response errors in this study are more likely to occur in numerical estimates since the only source generally available is memory of detailed material by the respondents.

For want of any othes guiding principle, one must assume that these errors are randomly distributed.

On the other hand, predominant errors may exist in quantitative responses in the smaller establishments since their records would tend to be less complete than those of larger establishments. However, the effect of quantities erroneously reported by small establishments would tend to be tempered by the greater weight of quantities given by large establishments.

The questionnaire and interviewer training are the main ways of controlling response error. On this study, it is considered that the questionnaire, field training, and supervision were such that response error was held to a minimum considering the nature of the data being collected.

The cause of response errors may be one or a combination of the two following factors:

1. Personal psychological motivations
2. Definition problems

The first factor may cause a respondent to give superficial estimates or reasons due to embarrassment when he lacks knowledge about a subject of which he feels he should be aware.

Examples of such responses on this study are listed below:

1. Statements that all frozen processed sna food is Government inspected.
2. Placing type of fish in wrong categories (i.e., codfish cakes under Portion Controlled Sea Food).
3. "Top of the head" estimates as to package sizes, number of servings per package, and refrigeration capacities.

Other psychological motivations such as disinterest, dislike, laziness, and other similar feelings result in superficial answers in that the respondent feels that his estimate is as accurate as the records and thus eliminates the laborious task of looking up the necessary data. In addition, various personality quirks affect the respondents attitude as to the type of establishment which he operates.

Definition problems may cause a respondent to react as described above, or he may unconsciously give incomplete or
erroneous answers due to his misinterpretation of the terminology employed or lack of adequate concentration to the question which is asked. This becomes apparent in situations such as the following:

1. Confusion of answers between questions where "types and sizes" of packages are considered as opposed to subsequent questions referring to "quality and condition" of the product.
2. Confusing steaks and fillets in regard to type of fish.
3. Considering fresh fish as frozen processed fish by virtue of the fact that the fresh fish is packed in ice.
4. Giving weekly figures for meals served or giving Friday totals in the case of fish meals in lieu of average daily meals served.
5. Respondents, when proprietors, counting themselves as employees.
6. Discrepancies between number of meals served and total receipts (this may also result from personal psychological motivations).

Obvious response errors were either corrected by the editorial staff or returned to the field for clarification.

## SECTION A - INTRODUCTION

The U.S. Bureau of Commerciul Fisherics of the Deperteent of lotertor hes asked us to conduct atudy woag varlous kinde of estiag establichments concorolige their use of fish and shellfish. The advace and guldance which you give us चill enable the comeerctel flshery industry bo provide you Fith better producter and services.

1 vould 11 ke to speak to the person who is reaponsible for purchasing the fishery produchs you use.

1. Heve you bought any seupood during the pest 12 CONEDS? (1NCLUOES FRESH, PROZEY OR CANNEO E'IEA OR \&HELLPISH)

$$
\begin{array}{lr}
\text { Yes } & 5-1 \\
\text { No } & -2
\end{array}
$$

IF MO. " SKIP TO SECTION C
2. Have you bought any frozeo processed seafood in the pest 12 wonths? (THE ITEM(S) HUST BE PROCESEED AND DELIVERED IN THF FROZEY FORM)

If "NO. © SKIP TO SECTION C

## SECTION B - USERS

3. About how ofteo do you get deliveries of Irozen processed sestood?

> Every day................

2-4 times per veek.
Once a veek.
2-3 tyes per aonth....
once month...........
Less then once a conth.
4. From that type of supplier do you usublly get frozen procesged sestood?
$\begin{array}{ll}\text { Searood Procesgor...... } & -8 \\ \text { Seafood rholeseler..... } & -8 \\ \text { Prozer Pood 01stributor } & -0\end{array}$
Otber $\qquad$
5. How far la your meln supdlier from this eatsblithecot?

Loes than $10 \mathrm{~m} 11 \mathrm{ee} . .$.
10-50 mlles.
51-100 wiles.
More than 100 wlleg...
Oon't know............. -4

6a. Can you think of any was in which any of your frozen processed Eeafood supplier(s) could tuprove services io you?

| Yes | -8 |
| :--- | :--- |
| No | -9 |
| $0 . K$. | -0 |

IF *WO O OR "O.K.. SXIP TO QUESTIOK 7
b. Mich supoliers?

$$
\begin{array}{lr}
\text { senf. d Processrir } & \text { 8-1 } \\
\text { Suafood Holesaler..... } & -2 \\
\text { frozen Food Digtributor } & -3
\end{array}
$$

(Specify)

6c. Hov could the servicer be 1 mproved? $\qquad$ 9.
7. As tar as you knou can you buy frozen processed seafood that is inspected or graded by the U. S. covernment?

$$
\begin{array}{ll}
\text { Yes } & 10-1 \\
\text { No }
\end{array}
$$

PF "YES, " SKIP TO QUESTION 8
b. If govermant Inspected or graded frozen procesaed seafood vere avallable, do you think you vould buy ゅore. less or bbout the euse as you do no:?

c. Why do you say that? $\qquad$ 11-
$\qquad$ Be. Do you buy any?

| Yes | $12-1$ |
| :--- | ---: |
| No | -2 |

IF "YES, " SXIP TO QUESTION 9
b. Wiy not? $\qquad$ 13.
(SKIP 70 Q. 10)
9a. Why do you buy it? $\qquad$ 14-
b. Has the government inspection had any efrect on the amount of frozen seafood you buy?


## FROZEN PROCESSEO SHELLFISH

10. What vere all the different ilnds of frozen proceased sbellfish tabt you bought in the wonth of November?

$$
\begin{aligned}
& \text { None }-16-\mathrm{X} \\
& \text { (SXIP TO O. 19) }
\end{aligned}
$$

FOR EACH KINO ASX:
11. How were the (Spectes) processed when you bought
them? Were they precooked, breaded or processed In any other as? (OESCRIBE THOROUGHLY)
12. Generslly, are you satisfled with the amount of pre-preparettion of the or ould you (Spectes'Fore)

FOR EAOH OIFFEREMT SPECIES/ FORM ASK:
13. Wat package size did you buy?

14 How wany packsrea did you buy during the month?
15. Hov many servinge do you usually get srow this slze packare.

| (10) |  |  |  |
| :--- | :--- | :--- | :--- |
| Clams | $\square$ |  |  |
| Crabs | $\square$ |  |  |
| Lobsters | $\square$ |  |  |
| Oysters | $\square$ |  |  |
| Scsillops | $\square$ |  |  |
| Shrimps | $\square$ |  |  |
| Other |  |  |  |
| Other |  |  |  |
| Other |  |  |  |



[^0]5a．Generally rpoakina．are you satiosied or not ith the typea end alzee of the frezen procesced oholl． flab packanem？

$$
\begin{array}{lr}
\text { Satiafted....... } & 31-1 \\
\text { Diseatiofled.... } & -2 \\
\text { O.K. ......... } & -3
\end{array}
$$

IF＂SATISFIED＂OR＂D．K＿．SKIP TO O． 17
b．Ia what wis mre you digeaticifed？ $\qquad$ $32-$

17a．Are you eatleflod or not ilh the quality and con－ dition of the frozen proceseed shellfish that you bus？

$$
\begin{array}{lr}
\text { Satiefled....... } & 33-1 \\
\text { Dleastiefied.... } & -2 \\
\text { D. X. .............. } & -3
\end{array}
$$

IF ©SATISFIEO＊OR ${ }^{\circ}$ D．K．．－SKIP TO O．LB
b．Why ore you dieertiolted？ $\qquad$ 34.

18．What percentase of the trazen praceeced whollfiah that you serve are

$$
\begin{array}{cc}
\begin{array}{c}
\text { lrled? } \\
\text { brolled? } \\
\text { bekod? }
\end{array} & \begin{array}{l}
35- \\
38- \\
\text { Other } \\
\text { (8decify) } \\
1005
\end{array}
\end{array}
$$

## PORTION CONTROLLED SEAFOOOS

As y u know nav you can buy portion controlled wesfoode （pre－formed）．By thle 1 vean llah that is srozen and prescut into unifora pleces or eesvinge，ready for final proparation．Far axasple．Clah oticks．

18a．Did you buy eny portione like this during Noveaber？

| Yee | $38-1$ |
| :--- | ---: |
| No | -2 |

IF FYES．＂SXIP TO 0． 20
b．In thare miy perticular toason thy you didn＇t？ （PROBE］

## IF＂HIGH PRICE＂OR＂HIGH COST＂MONTIOMED

 SXIP TO O． 34c． 16 price or cost one of the reseans for net buylne my？

$$
\begin{array}{lr}
\text { Yes } & 41-1 \\
\text { No } & -2
\end{array}
$$

SKIP TO Q． 34
20a．What are the principal odvantageg you con thluk of in ublng portlone？ $\qquad$ 42.

20b．What are the principal disadvantagee？ $\qquad$ 44－
$\qquad$ 45－

218．Do you think your custanere like partions better about the ease or lees than other kinde of frozen proceesed fleb？

| Like partlons better．． | 16－1 |
| :--- | ---: |
| Like pbout the same．．． | -2 |
| Like portlone leee．．．． | -3 |
| D．K．．．．．．．．．．．．．．．．．．．．．．．．． | -4 |

IF＂SME＂OR＂O．K．．＂SKIP TO O． 22
b．Wy do you thank that？ $\qquad$ 47.

22a．Considering everytbing thet goes into your total cat ould you bay that portione are mare expen－ alve，bout the eame or chemper to ue than other kinde of frozen procesed fleh？

| Portion more expenclve | 48－1 |
| :---: | :---: |
| About the eane． | －2 |
| Portione cherder | －3 |
| D． K ． |  |

IF＂SAME＂OR＂O．K．，＂SKIP TO O． 23
b．Why 16 that？ $\qquad$ 49.

23a．Weuld you say thet the quality of partions ie better，bout the seme，or poorer than othar kinds of Irazen processed 〔1sh？

| 『lsh？ |  |
| :--- | ---: |
| Portlone better | $50-1$ |
| About the 6ame． | -2 |
| Portions poorer | -3 |
| D．X．．．．．．．．．．． | -4 |

IF＇SME＂OR＇O．K．．．SXIP TO Q． 24
b．Dhy if thet？ $51-$

## SHOU CARO A

24．During Novamber which of theae typee of frozen lloh partions did you buy？

## FOR EACH TYPE ASK：

25．Thet $51 z 0$ package do you buy？（lbs．）
26．Ha many packeges did you buy last month？
27．How oeny ounces 18 eech portion in this glze pack age？

28．Ho many bervinga do you usually get froe this －ize packege？

28日．Are you 6 atisfled or not fith the quallty or con－ aitton of the portions that yau buy？


IF＂SATISFIED＂OR＂D．K．．＂SKIP TO O． 30 29 b.
b．Why are you dionatisfled？

0a．Generally speaking，are you satioried or not ．ith the alze of the portions in a package？ Satisfled．．．．．．66－1 Not entisfled．

$$
-2
$$

IF •SWTISFIED，SXIP TO 0． 31
b．What alze portion，in ounces，vould you prefer？ D2． 67.
318. Wat percentage $f$ the portions that you serve are.... pried?
b. Do gou cook portions vhlle still frozen?
32. Wen you order portlons rrom your suppller do you specily the kind of lleh you want or not?

Specify kind......
Do oot specify kind
-4
-5
33 Are you eurrently buying more, less of about the asae ewount of portions coapared to a year ago st this clee?

> Use aore no
> About the seme. Use dess no.... D. \& .....................

34 Are there other fortion controlled seafood iteas which are not no avallable but vish you vould dike to heve? (For exemple, such thans as individusl eassepoles, portions packed with differaut kinds of sauces. etc.)

If "MO* OR 'O.K.". SKIF TO Q. 36
35. That are they?

| Yé | $73-1$ |
| :--- | ---: |
| No | -2 |
| D. K. | -3 |

## FROZEN PROCESSED FISH

CARO 2
38. That vere sll the different kinds of irozen processed fish that you bought in the manth of Noveeber? 1 don' 1 eesn the portion controlled or pre-shaped 116 h e have just discussed.

None $-5 \cdot x$

## ROR EACH KINO ASX:

37. Hov vere tha $\frac{\text { (Specie6) }}{}$ procesced when you bought then? Were they stasks, fillets, precooked, bresded or wat? (DESCR18E THOROUGHLY)
38. Generally. are you sstisfled vith the amount of pre-preparation of the ? or would (Spectes Fore)
you prefer eore or less?
FOR EACH DIFFEREMT SPECIES/RORN ASK:
39. That package size did you buy?
40. Moveany packeses did you buy duriog the month?
41. Ho eany servinss do you usublly get from thas size package?

42a Generally speaking, are you satisiled or not sith the lypes and shzes of the irozen processed fish Dackages?

$$
\begin{array}{lr}
\text { Satdsfled...... } & 30-1 \\
\text { Dissitislied... } & -2 \\
\text { D.K. ....... } & -3
\end{array}
$$

IF "SATISFIEO* OR *O.K., SKIP TO a 43
b. In shat eays are you dissatisfledn

43a Are you satislled or not vith the quallity of condition of the trozen processed fish that you buy?

| Setisfled...... | $32-1$ |
| :--- | ---: |
| 0issutisfied... | -2 |
| D. K. ......... | -3 |

IF "SATISFIEO" OR "O.K.", SXIP TO Q. 4.
b. Why are you dissatisfled? $\qquad$
t4 What percentsge of the frozen processed ©ish thet you serve is

SKIP TO Q 46 IN "NOM PROFIT" ESTABLISHMETTS
45. Which is more profltable for you, frozen processed sesfood or other high protean loods? Frozen Processed Seafood
Other Other
$\begin{array}{ll}\text { (Specliy) } & \text { D.K }-\mathrm{K}\end{array}$

## ASK NL

46. Over the past tचeive months, about hov much did you spend for frozen processed seafoods
$\qquad$
SECTION C - NDN - USERS
47a. Have you ever served any trozen processed sealood in this estsbilshment?

| Yé | $41-1$ |
| :--- | ---: |
| No | -2 |
| D.K. | -3 |

IF "MO"OR "O.K.." SKIP TO QUESTION as
b. Why did you stop serving trozen processed sesfood? $\qquad$ 42-

48. Is there any particular reason why you don' serve any $\{$ rozen processed seafood?

49a. Do you have any cold storage facillties which are used (or could be used) for keeping frozen processed seafood?

| Yes | $45-1$ |
| :--- | ---: |
| No | -2 |

IF - NO, SKIP TO O. 50
b. About thet is your capacity in cubic feet? 48Cu. Pt. $\qquad$ 47-

50\%. Is there any particular type of lood that you specialize in serving?
$\begin{array}{lr}\text { Spectalty....... } & 48-1 \\ \text { No Spectality... } & -2\end{array}$
IF TO SPECIALT, *SKIP TO \& 51
b. Thet is your spocialty?

| 6teek or Chop House | -4 | Chinese Food | -7 |
| :---: | :---: | :---: | :---: |
| 8eafood. | -5 | Italian Food | -8 |
| Franch Pood. | -6 | Heal th Pood | -9 |
|  |  | Kosher | -0 |
| Other |  |  |  |

51. On hat many days of the maek are weala served here?

$$
\begin{array}{lr}
7 \text { days..... } & 49-1 \\
8 \text { days..... } & -2 \\
5 \text { days..... } & -3 \\
\text { Lesa than } 5 & -4
\end{array}
$$

52. That is your beating capacity?
$\qquad$ 50.

53a. About hov wany wain. (ofd-dey (luocb) mesla do you eerve aech mabday, excluding Esturday and Sunday?

b. How any of these are primarily seafood mealg?
c. About how enny main aid-day (lunch) meala do you Berve on seturdays and Sundsys?

d. Hoz meny of these are primerily seafood meals?

54. About how meny minn eventnr (supper) meals do you aerve ench eeekdsy, excluding Saturday and Sunday? \# $\qquad$ $60-$
b. How weny of these are primarlly seafood mats?
$\qquad$

c. About how many wain evealag (supper) weals do you serve on Saturdaya and Sundays? | Sun |
| :--- |
| 4 |


d. How eany of these gra primarily aeafood weals?
55. How meny regular emoloyees do you usually have that are enaared in the preparation and serving that are
of rood?

56. In the last 12 monthe nbout how much did you apend for food? \$.......
57. About whet percentage was this of your total operatine cost?

## SHOW CARO 8

58. In shich of these groups wonld you report your tosal recelpte from meals served duriar 2957 or your last plecal year?

Less then $\$ 10.000$ $\$ 10$ 000 to $\$ 40,000$ \$0.000 to \$40,000 $\$ 40.000$ to $\$ 100,000$ over $\$ 100.000$
59. About what is the average price per weal for sll the menls thet you serve (excluding 11 quor)? 8 $\quad 74=$
60. TYPE OF ROOD SERVICE OPERATIOM




Name of Person(s) intervieved $\qquad$



[^0]:    

