# Revenue (1897) Department.

MISCELLANEOUS SERIES.

G.O., No. 4890

DATED 16 Sept.

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[Despatch Abstract.]

Transmitting to the Secretary of State for India the forecast of the stores required by the Salt and Abkari Dept during the year 1898-99.

## BACK PAPERS.

| G.O | No. | Department. | Date. | G.O. | No. | Department. | Date. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## FURTHER PAPERS.

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# Revenue (1897) Department.

**CURRENT No.** 7984

DEPT OF REVENUE
13 SEP 97
REVENUE DEPARTMENT

***From*** The Secretary to the Commissioner of Salt, Abkari & Sep. Revenue

***Order***

Inis. No. 3823.

***Dated*** 2nd September 1897.

***Received*** 13.9.97

***Registered*** 16.9.97

***Enclosures***

***Spare copies***

## SUBJECT.

Submitting to Government the forecast of stores required from England for the use of the Salt and Abkari Departments during 1898—99.

D. Kurrum

Ld. 14.9.

BACK PAPERS.

| G.O. | No. | Department. | Date. |
|---|---|---|---|
| | 3733 | — | 17-8-86 |

FURTHER PAPERS.

| G.O. | No. | Department. | Date. |
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| | | | |

Forecast of stores required from England for 1898-99 for the use of the Salt and Abkari Department.

| Description of Articles | No: required | Rate of each article | Total value | To what head debitable. |
|---|---|---|---|---|
| | | £- s-d. | £- s- d | |
| Beaume's Hydrometers for testing brine | 20 | .. 4 6 | 4 10 .. | |
| Easil's Hydrometers glass & tubes in Brass-gany Cases with thermometers test glasses, and book of tables complete. | 12 | .. 5 10 | 66 .. .. | |
| Lasella's Saccharometers glass 3 stem 990-1040, 1040-1090, 1090-1140. or 970-1030, 1030-1090, 1090-1150. | 60 | Value not known. | | |
| Locks brass Revenue for use with labels with duplicate Keys 5½" × 8¼" | 150 | .. 15 6 | 116 5 .. | Salt. |
| Locks brass Revenue for use with labels with duplicate keys 2¼" × 1¼" | 50 | .. 14 3 | 35 12 6 | Abkari |
| Steel tapes 100 feet | 2 | Value not known. | | |
| Brass buttons for petty officers and peons with the inscription "Salt, abkari & Customs". | 175 gross | .. 1 7 | 13 17 1 | Superintendence |
| Glass Jars on foot 4" | 12 | .. 2 .. | 1 4 .. | |
| - Scientific Apparatus and Chemical re-agents - | | | | |
| Balance to Carry 500 grammes indicating 1/10 m.g. with agate knife edges and planes, rider slide and pan supports, plate glass bottom, Oertling's 6½" triangular beam. | 1 | | 21 .. .. | |
| Balance, 14 inch beam, Oertling's fitted as above but without plate glass bottom | 1 | | 18 18 .. | |
| Analytical weights:- set, 1 m.g. to 500 grammes | 1 | | 2 7 6 | |
| Do set, 1/100 grain to 1000 grains | 1 | | .. 15 .. | |

Spare

| Description of Articles | No: required. | Rate of each article. £ s d | Total Value £ s. d | Total less deductable |
|---|---|---|---|---|
| Spare riders, 1/10 grain | 24 | | 8 .. | |
| do —, 1 m.g. | 12 | | 4 .. | |
| Microscope with A and B (eye pieces, Coarse and fine rack adjustment, mechanical stage, fitted with iris diaphragm (say Newton and Heath, about) | 1 | | 18 .. | |
| do Accessories :- | | | | |
| Lamp | 1 | | 1 .. | |
| Condenser 2" | 1 | | .. 10 | |
| Turntable, spring | 1 | | .. 6 | |
| Heating table | 1 | | .. 8 6 | |
| do lamp for | 1 | | .. 2 6 | |
| Hand forceps | 1 | | .. 2 .. | |
| x Microscope, Accessories | | | | |
| stage forceps | 1 | | .. 5 .. | |
| Glass slides 3" x 1 | 144 | | 5 .. | |
| Cover glasses, circles, 1/200 | 13 | | .. 8 .. | |
| — do —, do, 1/150 | 1 | | .. 6 .. | |
| do, do, 1/80 | 1 | | .. 5 .. | |
| Polariscope, revolving analyser | 1 | | .. 1 5 .. | |
| Objectives, 2" | 1 | | 1 15 .. | |
| , 1 | 1 | | 1 15 .. | |
| , 1/2 | 1 | | 2 10 .. | |
| , 1/4 | 1 | | 2 10 .. | |
| , 1/8 | 1 | | 6 .. | |
| , 1/32 | 1 | | 10 .. | |
| | | | 5 .. | |

Conferred Dalt.

Conferred Dalt.

| Description of Articles | No: required. | Rate of each article. £ s. d. | Total Value £ s. d. | Total less deductable |
|---|---|---|---|---|
| — Beer distilling apparatus, as used in the Government Laboratory, London — | | | | |
| Stands | 6 | | 1 10 .. | |
| Glass Condensers | 12 | | 3 .. .. | |
| Flasks, about 1600 grains | 36 | | .. 12 .. | |
| Measures, 500 " | 6 | | .. 9 .. | |
| " 1000 " | 6 | | .. 12 .. | |
| Lixiviating Jars ∏. 30 ounces | 24 | | .. 18 .. | |
| Boiling flasks | 72 | | 4 .. .. | |
| Testing goblets, 8oz. Cylindrical ... | 12 | | .. 8 .. | |
| Rubber stoppers, 1 hole, Flask (24) and Condenser (48. | 72 | | 1 .. .. | |
| Thermometers, small for flasks and S.-G.-bottles, 12 of each | 24 | | 3 .. .. | |
| Specific gravity bottles with Case and Counter poise 1000 grains | 3 | | .. 12 .. | |
| do — do — 100 grains | 1 | | .. 4 .. | |
| Specific gravity bottles without Case and Counter poise 1000 grains | 12 | | 1 4 .. | |
| do — do — 100 grammes | 6 | | .. 12 .. | |
| Blowpipe for methylated spirit, 3½" flame | 1 | | .. 10 .. | |
| Screwdriver, watchmakers 1/8" | 1 | | .. 1 .. | |
| do " do 1/11" | 1 | | .. 1 .. | |
| Copper binding wire | 14 | | .. 1 6 | |
| Porcelain mortars and Pestles 4" | 2 | | .. 3 .. | |
| " " 6" | 2 | | .. 4 6 | |
| Glass mortars and pestles 6" | 2 | | .. 4 .. | |

Conferred Dalt.

| Description of Articles | No: required. | Rate of each article. £ | s. | d | Total Value. £ | s. | d | To what Head debitable. |
|---|---|---|---|---|---|---|---|---|
| Spatulas German silver 4" | 6 | | | | | 6 | | |
| " steel 8" | 6 | | | | | 10 | | |
| Pliers, cutting | 2 | | | | | 5 | | |
| " round nosed | 2 | | | | | 3 | 6 | |
| Punch cocks, screw 1/2" | 2 | | | | | 10 | | |
| " screw 3/4" | 12 | | | | | 12 | | |
| Cork borers, sets of 6 | 2 | | | | | 6 | | |
| Cork squeezer | 1 | | | | | 2 | | |
| Corks, finest, assorted for Apparatus | 144 | | | | | 8 | | |
| Files, triangular | 6 | | | | | 3 | | |
| " , 1/2 round, Rasps | 6 | | | | | 4 | | |
| Caoutchouc stoppers, assorted with 1, 2 n holes, diameter 1/2" | 24 | | | | | 2 | | Laboratory |
| " 3/4" | 24 | | | | | 4 | | |
| " 1" | 24 | | | | | 8 | | |
| " 1 1/2" | 12 | | | | | 8 | | |
| Water bottles, glass with neck at side, 4 pints | 6 | | | | | 12 | | |
| Retort-holders, tubes, to up to 2 inches | 2 | | | | | 15 | | |
| Condensers, do ... on stand with universal motion | 2 | | | | 1 | | | |
| Hinged wooden clamps on stands, Bunsen's | | | | | | | | |
| " small Blackwood | 2 | | | | | 10 | | |
| " large " | 2 | | | | | 14 | | |
| Table supports, wood, loaded feet 6" | 2 | | | | | 10 | | |
| Funnel holders, 2 funnels, small black | 2 | | | | | 10 | | |
| Test tube stands 24 tubes, 2 stages | 1 | | | | | 4 | | |
| Measures, glass 40 ozs. | 2 | | | | | 16 | | |

| Description of Articles | No: required. | Rate of each article. £ | s. | d | Total Value. £ | s. | d | To what Head debitable. |
|---|---|---|---|---|---|---|---|---|
| Glass measures, 1 gramme, graduated | 2 | | | | | 2 | | |
| Chemical Thermometers, F. Scale, 212 | 3 | | | | | 6 | | |
| Beaume's Saccharometer, adjusted at 84° 0-70 | | | | | | 2 | | |
| Argand Spirit lamps | 2 | | | | 2 | | | |
| Wicks for | 72 | | | | | 5 | | |
| Barthel Spirit Bunsen Burner, 8" flame | 1 | | | | 1 | 10 | | |
| Star top Burner | 1 | | | | | 1 | 3 | |
| Richard Spirit lamp with Regulator | 1 | | | | | 5 | | |
| Wicks | 24 | | | | | 2 | | |
| Hot water oven, with water guage and thermometer opening and block tin Condenser 14x10x10 | 1 | | | | 4 | | | |
| Copper water bath 4 openings 8x8x2 1/2 | 1 | | | | | 10 | 6 | |
| Tripod | 1 | | | | | 1 | | |
| Dessicating pans 4" | 3 | | | | | 6 | | |
| Exsiccator on wooden stand 6" | | | | | | 8 | | |
| Flasks, Bohemian-glass, 4 oz | 12 | | | | | 4 | | |
| Do 8 oz | 12 | | | | | 6 | | |
| Do 20 oz | 6 | | | | | 4 | | |
| Do 80 oz | 2 | | | | | 3 | | |
| Flasks, thin, flat-bottomed, welted mouth, Lipped | 24 | | | | 1 | 4 | | |
| Beakers, sets 1 to 48 oz, Berzelius narrow | 2 sets | | | | | 16 | | |
| " " , 80 oz lipped | 6 | | | | | 10 | | |
| " , 40 oz " | 12 | | | | | 5 | | |
| " , 1 1/2 oz " | 12 | | | | | 3 | | |
| Bottles free from lead, narrow, stoppered, German, 4 oz | 36 | | | | | 9 | | |
| " " " " " 8 oz | 24 | | | | | 8 | | |
| " " " " " 16 oz | 12 | | | | | 10 | | |

Laboratory Imperial

| Description of Articles | No: required | Rate of each article £ | s. | d | Total value £ | s. | d | To what head debitable. |
|---|---|---|---|---|---|---|---|---|
| Bottles, fire from lead, narrow stoppered German ½ litre | 12 | | | | | 10 | | |
| " " " " 4 pints | 12 | | | | | 18 | | |
| " " | 2 | | | | | 5 | | |
| Ether bottles, Caps, 8 oz. | 12 | | | | | 5 | | |
| Bottles, German, wide mouth stopper 8 oz | 24 | | | | | 15 | | |
| " " 16 oz | 6 | | | | | 8 | | |
| " " 2 pints | 12 | | | | 1 | 10 | | |
| Air tight covered stone Jars 4 quarts | 6 | | | | | 2 | 7 | |
| Glass funnels rubbed 4" | 6 | | | | | 8 | | |
| " 6" | 1000 | | | | | 8 | | |
| Filter papers, ordinary, 7½" | 1000 | | | | | 12 | | |
| " , Swedish 7½" | 1 | | | | | 7 | | |
| Pyramid filter case, 6 shelves | 2 | | | | | 8 | | |
| Separatory funnels, stopper and stopcock, 20oz | 12 | | | | | 2 | | |
| Glass covers for funnels 6" | 12 | | | | | 4 | | |
| " " 8" | 6 | | | | | 2 | | |
| Pipettes 5 C.C.ms not graduated | 3 | | | | | 2 | | |
| " 25 " " | 3 | | | | | 2 | | |
| " 50 " " | 2 | | | | | 2 | | |
| " 100 " " | 3 | | | | | 3 | | |
| " rests 3" square, 4 flutes | 6 | | | | | 4 | | |
| " 5 C.C.ms. divided into 1/10 CC. | 3 | | | | | 4 | | |
| " 25 " | 3 | | | | | 6 | | |
| " 50 " | 3 | | | | | 2 | | |
| Syphons with Suction tube glass ½" short limb | 12 | | | | | 10 | | |
| Wash bottles 20 oz. | 12 | | | | | 18 | | |
| " " 40 oz | 12 | | | | | 3 | | |

Imperial Stamps

| Description of Articles | No: required | Rate of each article £ | s. | d | Total value £ | s. | d | To what head debitable. |
|---|---|---|---|---|---|---|---|---|
| Porcelain Basins, shallow 4" | 12 | | | | | 6 | | |
| " " " 6" | 12 | | | | | 15 | | |
| " " " 10" | 6 | | | | 1 | 18 | | |
| Clip for holding watch glasses in pairs | 6 | | | | | 2 | | |
| Retorts, stopd., 16 oz | 12 | | | | | 10 | | |
| " 40 oz | 12 | | | | | 15 | | |
| Leibeg's Condenser, glass 36 x 1¾ | 2 | | | | | 10 | | |
| Condenser Stands wood with Clamps | 2 | | | | 1 | | | |
| Thistle funnels 8" length | 12 | | | | | 2 | | |
| " " 12" | 12 | | | | | 2 | | |
| Rubber tubing, best quality red ¼" | 120 | | | | | 6 | | |
| " 3/8" | 24 | | | | | 12 | | |
| " ½" | 24 | | | | 1 | | | |
| " 1" | 12 | | | | 1 | 10 | | |
| Kipp's apparatus, 6" diameter globes | 2 | | | | 1 | 4 | | |
| Pneumatic trough, stoneware, beechwood shelf 11x5 | 2 | | | | | 6 | | |
| Test tubes, 2 x ¼ | 144 | | | | | 2 | | |
| do , 3 x ½ | 144 | | | | | 3 | | |
| do , 4 x 5/8 | 72 | | | | | 5 | | |
| do , 5 x ½ | 72 | | | | | 5 | | |
| do , 6 x ¾ | 72 | | | | | 9 | | |
| Test papers, Red and blue litmus, starch and each (¼ each) | 12 | | | | | 5 | | |
| Phenol Phthaline | 12 | | | | | 2 | | |
| Burettes, Gribb's, stand for 4 Burettes and bottles + bottles | 1 | | | | | 2 | | |
| Measuring flasks, 25 C.C.ms. plain | 12 | | | | | 5 | | |
| —— do ——, 50 C.C.ms " | 12 | | | | | 6 | | |
| —— do ——, 70 C.C.ms " | 6 | | | | | 4 | | |

Imperial Stamps

| Description of Articles | No: required | Rate of each article. £ | s | d | Total Value. £ | s | d | To what head debitable. |
|---|---|---|---|---|---|---|---|---|
| Measuring flasks, 250 ccms, stoppered | 2 | | | | .. 2 | .. | | |
| —— do —— 500 " " | 2 | | | | .. 3 | .. | | |
| —— do —— 1000 " " | 2 | | | | .. 4 | .. | | |
| Porcelain slabs, 8" | 2 | | | | .. 8 | .. | | |
| Glass tubing, soft, 6" small, 3 lbs med. 3, 3/4 to 1 in | 12 | | | | .. 10 | .. | | |
| Glass rod of sizes | 10 " | | | | .. 10 | .. | | |
| Test tubes & squeezers | 24 | | | | .. 5 | .. | | |
| Platinum wire | 1 foot | | | | .. 2 | .. | | |
| — Reagents required from Europe — | | | | | | | | |
| Acid, Acetic, glacial, 60° | 8 oz | | | | .. 2 | .. | | |
| " , Arsenious pure | 16 " | | | | .. 8 | | | |
| " Boracic, cryst: | 16 " | | | | .. 1 | .. | | |
| " Hydrochloric pure | 6 lbs | | | | .. 2 | .. | | |
| " Nitric " | 6 " | | | | .. 8 | .. | | |
| " Oxalic " | 1 " | | | | .. 1 | 6 | | |
| " Phosphoric " | 1 " | | | | .. 4 | .. | | |
| " Pyrogallic " | 2 oz | | | | .. 2 | .. | | |
| " Salycylic " | 8 " | | | | .. 4 | .. | | |
| " Sulphuric " | 6 lbs | | | | .. 2 | .. | | |
| " Tartaric crystal | 1 " | | | | .. 2 | .. | | |
| Alcohol, absolute | 1 " | | | | .. 5 | .. | | |
| alum, chrome | 2 " | | | | .. 1 | .. | | |
| Ammonia S.g. .880 | 6 " | | | | .. 3 | .. | | |
| Ammonium Chloride pure | 5 " | | | | .. 4 | .. | | |

Imperial Salts

| Description of Articles | No: required | Rate of each article. £ | s | d | Total Value. £ | s | d | To what head debitable. |
|---|---|---|---|---|---|---|---|---|
| Ammonium Sulphide sol: | 6 lbs | | | | .. 3 | 6 | | |
| Barium Chloride pure | 6 " | | | | .. 4 | .. | | |
| Calcium Carbonate (Iceland Spar) | 8 oz | | | | .. 5 | .. | | |
| " Chloride pure | 6 lbs | | | | .. 9 | .. | | |
| Copper Sulphate " | 6 lbs | | | | .. 76 | | | |
| Ether pure .720 | 1 " | | | | .. 66 | | | |
| Fusel oil pure | 1 " | | | | .. 2 | .. | | |
| Iron Sulphate, proto, pure | 6 " | | | | .. 2 | .. | | |
| " Sulphide granular | 24 " | | | | .. 10 | .. | | |
| Lead Sub-acetate | 4 " | | | | .. 3 | .. | | |
| Manganese Oxide pure | 1 " | | | | .. 4 | .. | | |
| Microcosmic salt | 2 " | | | | .. 5 | .. | | |
| Mercury perchloride | 1 " | | | | .. 4 | .. | | |
| ~~Pott~~ Potassium Bichromate crystals | 2 " | | | | .. 3 | .. | | |
| " and Soda Bitartrate (Rochelle Salt) | 2 " | | | | .. 2 | 6 | | |
| " Chromate | 2 " | | | | .. 5 | .. | | |
| " Cyanide, sticks | 1 " | | | | .. 2 | 6 | | |
| " Ferricyanide | 1 " | | | | .. 4 | 6 | | |
| " Ferro-cyanide | 1 " | | | | .. 2 | 6 | | |
| " Caustic sticks | 2 " | | | | .. 2 | | | |
| " Permanganate, pure | 2 " | | | | .. 4 | .. | | |
| Silver Nitrate | 4 oz | | | | .. 10 | .. | | |
| Sodium Bi-carbonate pure | 4 lbs | | | | .. 4 | .. | | |
| " Hyposulphite, re-cryst: | 4 " | | | | .. 3 | .. | | |
| " Caustic sticks | 2 " | | | | .. 2 | 6 | | |
| " Hypophosphite | 4 " | | | | .. 4 | .. | | |
| Strontium Nitrate, pure | 2 " | | | | .. 3 | .. | | |

Imperial Salts

| Description of Articles | No. required. | Rate of each article | Total value | To what de head debitable. |
|---|---|---|---|---|
| | | £ s. d | £ s. d | |
| Zinc free from arsenic sticks | 2 lbs | .. .. .. | .. 2 6 | |
| " Sulphate pure | 3 .. | | .. 3 .. | |
| | | | £ 402 .. 9 | |

Imperial Salt.

(Signed) Edmund Drilliet
Assistant Secretary

SHKJ.

REVENUE BOARD OFFICE. MADRAS.

Proceedings of the Board of Revenue

(Separate Revenue.)

Dated 2nd September 1897.

Mis. No. 3823.

Read letter from the Deputy Commissioner of Abkari, Madras. No 158 dated 28th August 1897, submitting to the Board certain lists of stores to be ordered from Europe for the new Laboratory.

Resolution.

Adverting to para 2 of Government Order, Revenue No. 620 dated 29th June 1887 the Board beg. to submit the forecast of stores required from England for the use of the Salt and Abkari Department during the year 1898-99.

The forecast for the Customs Department

Cus. 79 of 4

partment will be submitted as soon as complete information is received from the districts.

(True Extract)

Commencing

Assistant Secretary.

To

The Secretary to Government

Revenue Department

With a statement.

Dept 7-9-97

List

Dept 16/9

G.O. Mis No 4890 dt/16 Sept 97

Ordered that this forecast be forwarded to the Rt. Hon'ble the Secretary of State for India

16/9/97

Cir 16/9/97 To

The Board of Rev. (Sepl Leg)

No: 51d 23 Septr. 1897) No. 21-9-97

To

The Asst: Under Secretary of State for India

Sir,

Adverting to the Despatch from the Rt. Hon'ble the Secretary of State for India, dated 31st March (88) No. 100 I am directed to forward a copy of the Proceedings of this Govt. embodying a forecast of the stores required by the Salt and

Dept 20/9/97

G.O. No 4890 dt/16-9-97

partme
will
con
fro

and Abkari Dept. during
the year 1898-99.

2 I am to add
that the forecast for
the Customs Department
will be separately for-
warded, as soon as com-
-plete information called
for by the Board of
Revenue is received.

I have &c.

16/9/99

16/9/99

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READ AGAIN G.O., No. 189 DATED

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ENCLOSURES TO C. No.

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| LETTER OF GOVERNMENT. | | | | | | | |
| STATEMENT WITH DITTO. | | | | | | | |
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