

(1) Number of pages 20(2) Date of repair 7-9-38(3) Initials of the Referencer 8

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	2502	Press- Mis.
Dated	25-4-18	90

Not to be folded or roughly handled

IX
The Hague, 4th February 1890.

R.S. 160/90. Sir,

In reply to your letter of 20th January, R.S. 1886, I have the honour to report the following:

The sulphate of quinine manufactured on the Government cinchona plantations at Naduvatam, contained in the two bottles sent to me, proved after careful investigation to be quite identical. The physical character is different from that of commercial sulphate of quinine, which is more woolly and lighter.

Although this lightness is generally appreciated in the trade, my numerous investigations of all the different brands of sulphate of quinine in the market have convinced me that this preference given to light woolly sulphate of quinine is nothing but a prejudice for I have proved by experiment that the lightest of all the brands of sulphate of quinine on the London market, viz. the brand called "Pelletier's quinine" or "des 3 cachets" contains not less than 11 per cent of sulphate of cinchonidine. Therefore I consider the somewhat different physical character of the Naduvatam samples of not the least importance and would I not have mentioned it if I had not

The Under Secretary of State
for India

been

been requested in your letter to report on the physical character.

The chemical character however is of the highest importance and therefore I feel a great satisfaction that my careful qualitative and quantitative analysis of both the samples yielded the following excellent results:

The qualitative analysis performed by my chromate test proved the presence of an exceptionally small quantity of cinchonidine, which was much smaller than that found by me with the same test in all the different brands of sulphate of quinine found on the London market.

Considering that this exceptionally small amount of cinchonidine contained in both the samples made the accurate quantitative determination of it of great importance I transformed both the samples into tartrates and requested my friend Professor Oudemans to apply on them his celebrated very accurate optical test for ascertaining the quantity of cinchonidine contained in them. The result of his careful investigation was:

- 1° That both the samples contain the same quantity of cinchonidine and are therefore identical.
- 2° That this quantity is equivalent to 1.4 per cent of sulphate of cinchonidine contained in each of the mentioned samples of sulphate of quinine.

Considering that the British Pharmacopoeia requires: 'sulphate of quinine should not contain much

more

more than 5 per cent of sulphates of other alkaloids it is clear that the sulphate of quinine manufactured at Maduratum is not only satisfactory to the requisition of the British Pharmacopoeia, but is even much purer than any commercial sulphate of quinine.

I am &c.

(Sd) Dr. J. E. de Vrij. b. J. E.

46 Lorraine Road Holloway, London N.

January 23rd 1890.

To the Under Secretary of State for India
Sir,

In reply to your letter R. & S.
1886 dated 20th January 1890, I have
the honour to report to you that,
in accordance with your request, I
have examined the two Samples of
Sulphate of Quinine manufactured
at Nativatum with the following
results:—

Both Samples were well crystallised
in small light crystals fairly
uniform in size, which dissolved
quickly and completely in dilute
acid forming colorless solutions.

On analysis they yielded me:—

Water of Crystallization ——— 14.2 - 13.7

Anhydrous Cinchonidine Sulphate — 1.6 - 2.2

Anhydrous Quinine Sulphate — 84.2 - 84.1

100.0 100.0

Crystallised Quinine Sulphate, when
freshly prepared contains 15% of
water

Rev. 26.5.1890

water, but by exposure to the air it gradually loses a portion of this water. Hence the Sulphate very frequently contains somewhat less than the full amount.

The proportion of binchonidine present in these samples is notably small.

The British Pharmacopœia, which is the Official Authority for defining the quality of drugs for use in medicine in this country, states that "Quinine Sulphate should not contain much more than 5 per cent of Sulphates of other Cinchona Alkaloids." It will be seen from this that these samples are of a high Degree of purity; and in other respects they possess all the characters of good Sulphate of Quinine.

Practically all the Quinine of commerce contains binchonidine; the proportion in some cases being as much as 10 or 12 per cent, and, even

in

11 7³/₄

in good quinine, ranging generally from 3 to 6 %-. This arises from the difficulty of effecting the complete separation of binchonidine in the processes of manufacture; and as its presence in moderate amount in no way detracts from the medicinal activity of the Quinine, the occurrence of about 5 per cent is considered unobjectionable. To this extent it is permitted by the requirements of the British Pharmacopœia.

When Quinine is prepared exclusively from good Calisaya or Officinalis bark (containing much Quinine with but a small proportion of binchonidine) it is quite practicable to obtain the Quinine of the quality of these samples. But in its manufacture from other barks such as Succirubra and certain hybrids in which the amount of binchonidine is often

very

very large, it may be more difficult to maintain such a high degree of purity. I venture to offer these remarks because I assume that these samples have been obtained from bark suitable to the purpose; but if the production of Quinine on the Govt. plantations in India should extend to the working up of all the bark grown, it may not prove economically advisable to aim at quite so high a standard of excellence as these samples would tend to establish.

I have the honour to be,

Sir,

Your Obedient Servant,
(signed) C. H. Wood.

8.

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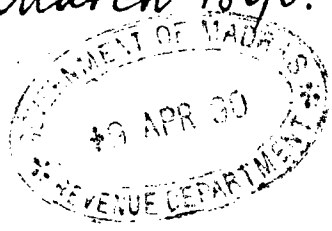
320

Copy of Reports by Dr. J. B. de
Vrij & Mr. C. Wood
dated 4th Feb & 23rd Jan 1890.

Referred to in Revenue Despatch
to Madras, No. 2, dated 13th March 1890
Para. 1.

Rev. 26th 1890

India Office,
London, 13th March 1890.



Revenue

No. 2.

My Lord,

The samples of Sulphate
of Quinine referred to in your
letter of the 26th November last,
No. 20, Revenue, were duly
submitted, as asked by your
Lordship to Dr. de Vrij and to
Mr. C. Wood for analysis, and
copies of their reports are
forwarded herewith.

2. The results of the analyses,
which show that the samples only
contained from 1.4 to 2.2 per
cent of sulphate of cinchonidine,
are so highly satisfactory
that I should be glad of
full information as to
the

His Excellency
The Right Honorable
The Governor in Council,
Fort. St. George.

the process by which these
samples were prepared.

I have the honor to be,

My Lord,

Your Lordship's most obedient
humble servant,

Loose

Nº

Revenue

13th March 1890

The
Letter to Fort St. George

Nº 2

7/4/30

85
1

(1890.)

REVENUE DEPARTMENT.

No. 2659

ABSTRACT.

From

*Accept
The Secretary
State for India*

Dated 13 March.

Received 9 April.

Enclosures 2

Rev. No. 2.

SUBJECT.

*stating that the results of
analysis of the samples
of sulphate of quinine
referred to are highly
satisfactory and requesting
to be furnished with
full information as to
the process by which
these samples were
prepared.*

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read Cuo. 2650/90.

G. G. Mis. No. 2502 of 25 April 1890

Communicated to the Govt.
Botanist and Director of
Govt. Cinchona Plantations.

*JWS
16/4/90*
2. Mr. Lawson is requested
for transmission to the Secy
to submit a detailed report
giving
~~embodying~~ full information
*10/4
16 Apr.*
as to the process by which the
samples were prepared.

*I would impress on Mr. Lawson
the importance of avoiding failure
to meet indent. I doubt whether
he will turn out the quantity required*

*Ues
16 Apr.*
To
The Govt. Botanist and Dir.
of Govt. Cinchona Plantations

*Run
11.4.90.
U
15/4*
3. It is observed that
several indents for
quinine have been received
from the officers addressed
under G.O. 7331. of 15 Nov. 89.
and the Govt. desires to
impress on Mr. Lawson the
importance of avoiding
failure to supply the
required quantities.

*U Run
16/4 15.4.90*

20 33 13 4-6-7-11

Cuo. 2650/90

Secy. of State's Despatch
on the Samples of Sulphate
of Quinine forwarded to
him.

H. 4.

25-10

The Hon. J. H. Garstin, C. I.
The Hon. H. E. Stokes, C. I.

S. No.

3577/90

10/11
25/11
25/11

4-1-1910
MISCELLANEOUS SERIES.

REVENUE DEPARTMENT.	
G.O., DATED	25 April
No. 2502	1890

When given for copying

[Despatch Abstract.]

Despatch from Secy
of State forwarding
opinions on the samples
of genuine sent to him