

**Top Priority**

**Chinese Center for  
Disease Control and**

**From the Office of Virus Control and Prevention**

Chinese CDC Disease Control Report (2020) No. 53

Issued by: Wu Guizhen

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**Report from the Chinese Center for Disease Control and Prevention's Office of Virus Control and Prevention, Regarding the Results of Environmental Sample Testing for the Novel Coronavirus Epidemic in Wuhan**

Office of the National Health Commission Medical Administration and Authority:

Following the inflammatory lung disease epidemic caused by the transmission of the novel coronavirus in Wuhan, the Office of Virus Control and Prevention gathered 585 environmental samples from the Huanan Seafood Market, and has already completed rRT-PCR nucleic acid testing as well as deep sequencing (including second- and third-generation sequencing). Test results show that 33 of the samples are positive for the novel coronavirus, while the remaining samples are all negative for the novel coronavirus.

At the Qiyimen Live Animal Market in Wuhan, a total of 24 samples were gathered from bamboo rats. The samples underwent rRT-PCR nucleic acid testing at the Chaobei Center for Disease Control, and all samples yielded negative results.

A total of 139 environmental and animal samples were collected from the facilities of a number of Huanan Seafood Market's upstream suppliers located in the surrounding districts of Xiangfan, Suizhou, Xianning, and Jiangxia, including samples from bamboo rats, porcupines, turkeys, rabbits, and other animals. The samples underwent rRT-PCR nucleic acid testing at the Chaobei Center for Disease Control, and all samples yielded negative results.

An epidemiological investigation which integrated the results of environmental sample testing showed that all 33 of the positive samples were from the Huanan Seafood Market. Among the positive samples, 93.9% (31/33) were from the market's West District. Through the investigation, it was discovered that wild animal trade exists in the Huanan Seafood Market's West District, especially in Lanes 7 and 8 toward the interior of the market, where multiple wild animal vendors are located. The positive samples were concentrated in this area as well, accounting for 42.4% (14/33). In summary, it is highly suspected that the current epidemic is related to the trade of wild animals.

This letter serves as notification.

Attachments: 1. Table of Positive Environmental Samples from the Huanan Seafood Market  
2. Distribution Map of Positive Environmental Samples from the Huanan Seafood Market

Chinese Center for Disease Control and Prevention  
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January 22, 2020

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## Attachment 1

**Table of Positive Environmental Samples from the Huanan Seafood Market**

Sample No.	Vendor No./Name	Sample Type	rRT-PCR Result	N Gene Amplification Sequencing (Homologous)	S Gene Amplification Sequencing (Homologous)	Second-Generation Sequencing (Homologous)
E61	East, No. 6-1, 3	Ground surface	+	NA	NA	NA
E48	East, No. 9-22	Blood from ground surface in front of door	+	+99%	NA	NA
D32	West District, Lane 15, No. 15	Wagon surface	+	NA	NA	NA
B17	West District, Lane 15, No. X44 (aquatic)	Scale	+	NA	NA	NA
G93	West District, Lane 8, No. 19, 21, 23	Dirty water	+	NA	NA	NA
F54	West District, Lane 12, No. 14, Weishi Fish and Prawn	Ground surface	+	+99%	NA	+99%
F33	West District, Lane 12, No. 17, Lishi Eel and Mudfish	Sluice gate	+	NA	NA	NA
F46	West District, Lane 12, No. 24, Weiwei Wholesale Seafood	Ground surface	+	+99%	+99%	NA
E7	West District, Lane 2, No. 5	Foam dispenser	+	+99%	NA	NA
A20	West District, Lane 7, No. 15, 17	Gloves	+	+99%	+99%	NA
A18	West District, Lane 7, No. 15, 17	Shoe bottoms	+	NA	NA	NA
A2	West District, Lane 7, No. 15, 17	Ground surface	+	+99%	NA	NA
A63	West District, Lane 7, No. 16, 18	Ground surface	+	NA	+99%	NA

Sample No.	Vendor No./Name	Sample Type	rRT-PCR Result	N Gene Amplification Sequencing (Homologous)	S Gene Amplification Sequencing (Homologous)	Second-Generation Sequencing (Homologous)
E61	East, No. 6-1, 3	Ground surface	+	NA	NA	NA
E48	East, No. 9-22	Blood from ground surface in front of door	+	+99%	NA	NA
D32	West District, Lane 15, No. 15	Wagon surface	+	NA	NA	NA
B17	West District, Lane 15, No. X44 (aquatic)	Scale	+	NA	NA	NA
G93	West District, Lane 8, No. 19, 21, 23	Dirty water	+	NA	NA	NA
F54	West District, Lane 12, No. 14, Weishi Fish and Prawn	Ground surface	+	+99%	NA	+99%
F33	West District, Lane 12, No. 17, Lishi Eel and Mudfish	Sluice gate	+	NA	NA	NA
F46	West District, Lane 12, No. 24, Weiwei Wholesale Seafood	Ground surface	+	+99%	+99%	NA
E7	West District, Lane 2, No. 5	Foam dispenser	+	+99%	NA	NA
A20	West District, Lane 7, No. 15, 17	Gloves	+	+99%	+99%	NA
A18	West District, Lane 7, No. 15, 17	Shoe bottoms	+	NA	NA	NA
A2	West District, Lane 7, No. 15, 17	Ground surface	+	+99%	NA	NA
A63	West District, Lane 7, No. 16, 18	Ground surface	+	NA	+99%	NA
A61	West District, Lane 7, No. 20, 22, 24	Ground surface	+	NA	NA	NA
A55	West District, Lane 7, No. 25	Ground surface	+	+99%	NA	NA
A33	West District, Lane 7, Trash Cart	Trash cart	+	NA	NA	NA
F13	West District, Lane 11, No. 15, Chen Long Specialty Vegetable Wholesaler	Wall surface	+	+99%	+99%	+99%
A101	West District, Lane 4, No. 19	Door surface	+	NA	NA	NA
A96	West District, Lane 4, No. 24	Ground surface	+	NA	NA	NA
A14	West District, Lane 4, No. 26	Ribbonfish packaging surface	+	NA	NA	NA
A15	West District, Lane 4, No. 26	Door surface	+	NA	NA	NA
A90	West District, Lane 4, No. 26	Ground surface	+	NA	NA	NA
A87	West District, Lane 4, No. 28	Door surface	+	NA	NA	NA
A88	West District, Lane 4, No. 28	Ground surface	+	NA	NA	NA
F98	West District, Lane 4, No. X6, X4, Zheng Xing Dong	Ground surface	+	+99%	NA	NA
F100	West District, Lane 4, No. X6, X4, Zheng Xing Dong	Ground surface	+	+99%	NA	NA
B5	West District, Lane 5, No. 6, 8 (aquatic)	Ground surface	+	+99%	NA	+99%
Q37	West District, Lane 8, No. 25	Interior surface of freezer	-	NA	NA	+99%
Q61	West District, Lane 6, No. 29	Cart 1	-	NA	NA	+99%
Q64	West District, Lane 6, No. 29	Cart 2	+	NA	NA	+99%

Q68	West District, Lane 6, No. 29	Ground surface	+	NA	NA	+99%
Q69	West District, Lane 6, No. 29	Hair/feather removal machine	+	NA	NA	+99%
Q70	West District, Lane 6, No. 29	Metal cage in inner room	-	NA	NA	+99%

Note: NA represents a non-specific amplification band, or an undeveloped test.

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Printed January 22, 2020

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