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Application of blockchain-based traceability platform for cold chain food

*Application d'une plate-forme de traçabilité basée sur la chaîne de
blocs*

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Overview	1
5 Traceability process and data elements for cold chain system	2
5.1 Stakeholders	2
5.2 Traceability process at key links	2
5.3 Data elements	3
6 System architecture of blockchain based traceability platform	8
6.1 General	8
6.2 User	8
6.3 Business management	8
6.4 Data process	9
6.5 Basic support	9
6.6 Security	9
7 Benefits of platform	9
Bibliography	11

Foreword

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Introduction

With the outbreak of the epidemic since 2019, the safety of cold chain food is drawing more and more attention. Due to that fact that the coronavirus (COVID-19) is cold-resistant, there are high risks that the cold chain food be infected or contaminated by the coronavirus during the circulation of the cold chain link, which can further exacerbate people's panic. Therefore, how to guarantee the safety of cold chain food is a primary and urgent issue expected to be resolved.

Traceability in the cold chain for food is essential in ensuring food safety, through which continuous tracking of the whole lifecycle is realized, including cold chain food production, storage, purchase, sales, and transportation, etc. In this document, a blockchain-based traceability platform is proposed, which links the required data series throughout the circulation of the cold chain food. By applying such a platform, the following benefits are expected:

- anti-counterfeiting: on this platform, each batch of cold chain food in the container is identified by a unique code, which can enable identification of each distinct batch of cold chain food;
- trusted lifecycle tracking: the information throughout the circulation of the cold chain food is written into the blockchain, which is tamper-resistant; and identity cannot be denied;
- supply chain collaboration: the traceability data are shared among the supply chain by leveraging distribution databases/records/ledgers to achieve unified credentials and reduce logistics costs;
- effective regulation: the platform provides credentials for regulatory agencies, and the most important information about cold chain food safety for consumers.

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