



# Smart Contract Security Audit Report

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## Crypto Classic

December 2022

Security Status



[www.hacksafe.io](https://www.hacksafe.io)



# Audit Details



## Audited project

Crypto Classic



## Deployer address

0xdf6fee057222d2f7933c215c11e5150bd2efc53e



## Client contacts

Crypto Classic Team



## Blockchain

Binance smart chain



## Website

Not provided



# Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.



# Procedure

## **Step 1 - In-Depth Manual Review**

Manual line-by-line code reviews to ensure the logic behind each function is sound and safe from various attack vectors. This is the most important and lengthy portion of the audit process (as automated tools often cannot find the nuances that lead to exploits such as flash loan attacks).

## **Step 2 - Automated Testing**

Simulation of a variety of interactions with your Smart Contract on a test blockchain leveraging a combination of automated test tools and manual testing to determine if any security vulnerabilities exist.

## **Step 3 – Leadership Review**

The engineers assigned to the audit will schedule meetings with our leadership team to review the contracts, any comments or findings, and ask questions to further apply adversarial thinking to discuss less common attack vectors.

## **Step 4 - Resolution of Issues**

Consulting with the team to provide our recommendations to ensure the code's security and optimize its gas efficiency, if possible. We assist project team's in resolving any outstanding issues or implementing our recommendations.

## **Step 5 - Published Audit Report**

Boiling down results and findings into an easy-to-read report tailored to the project. Our audit reports highlight resolved issues and any risks that exist to the project or its users, along with any remaining suggested remediation measures. Diagrams are included at the end of each report to help users understand the interactions which occur within the project.

# Background

HackSafe was commissioned by Crypto Classic to perform an audit of smart contracts:

- <https://bscscan.com/token/0xf7BCac494fd9530c183dae30Db48d45144FF2C77#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be understood to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

# Contract Details

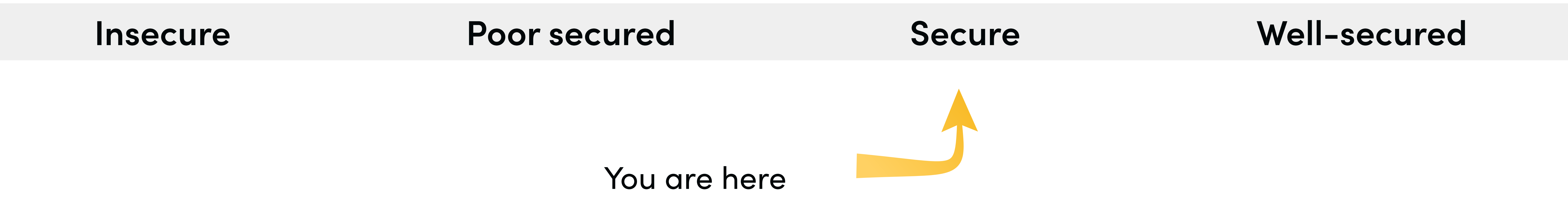
## Token contract details for 14.12.2022

Token Type	: DEFI
Contract name	: CoinToken
Contract address	: 0xf7BCac494fd9530c183dae30Db48d45144FF2C77
Total supply	: 100,000,000
Token ticker	: CRC
Decimals	: 9
Token Holders	: 2,633
Transactions count	: 15,073
Compiler version	: v0.4.24+commit.e67f0147
Contract deployer address	: 0xdf6fee057222d2f7933c215c11e5150bd2efc53e
Owner address	: 0x0000000000000000000000000000000000000000000000000000000000000001



# Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are “**Secure**”. This token contract does contain owner control, which do not make it fully decentralized.



We used various tools like Slither, Mythril and Remix IDE. At the same time this finding is based on critical analysis of the manual audit. All issues found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the issues checking status.

We found 0 critical, 0 high, 0 medium and 2 low.

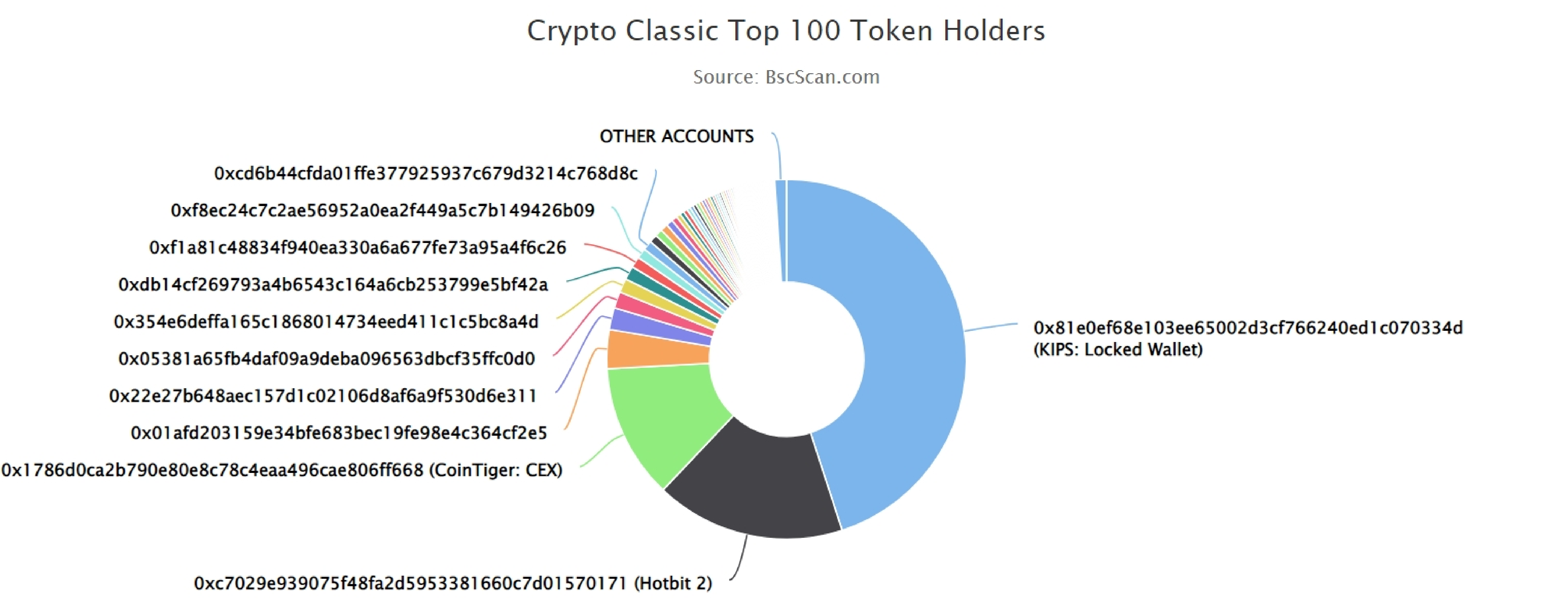
# CoinToken Token Distribution

 The top 100 holders collectively own 98.95% (98,946,197.27 Tokens) of Crypto Classic

 Token Total Supply: 100,000,000.00 Token


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Total Token Holders: 2,633



## CoinToken Top 20 Token Holders

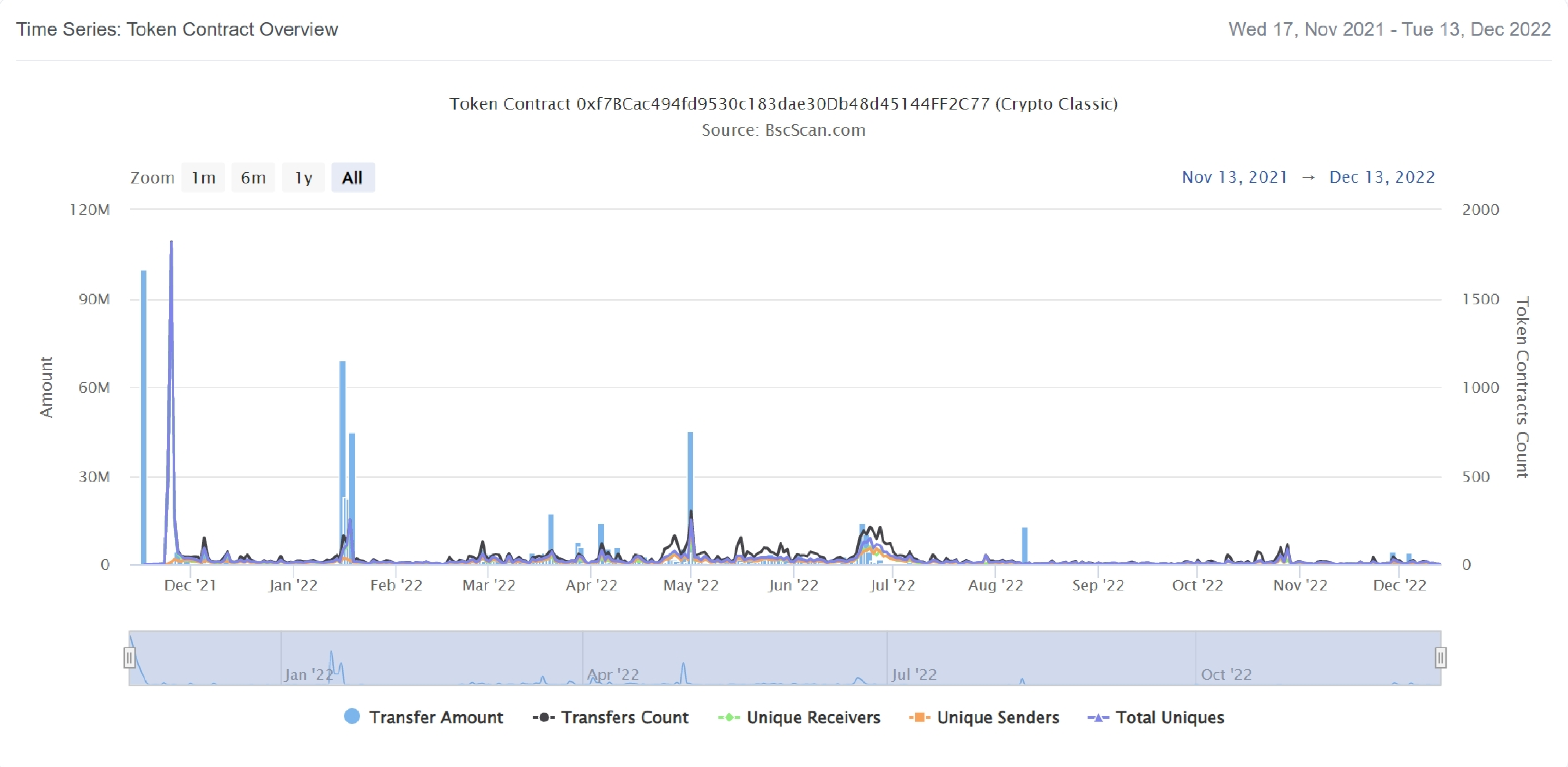
(A total of 98,946,197.27 tokens held by the top 100 accounts from the total supply of 100,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	 KIPS: Locked Wallet	45,000,000	45.0000%
2	Hotbit 2	17,060,496.456141437	17.0605%
3	CoinTiger: CEX	12,097,536.659687119	12.0975%
4	0x01afd203159e34bfe683bec19fe98e4c364cf2e5	3,500,001.06198023	3.5000%
5	0x22e27b648aec157d1c02106d8af6a9f530d6e311	1,963,543.02005229	1.9635%
6	0x05381a65fb4daf09a9deba096563dbcf35ffc0d0	1,482,007.046419991	1.4820%
7	0x354e6deffa165c1868014734eed411c1c5bc8a4d	1,250,006	1.2500%
8	0xdb14cf269793a4b6543c164a6cb253799e5bf42a	1,232,505	1.2325%
9	0xf1a81c48834f940ea330a6a677fe73a95a4f6c26	986,698.94833187	0.9867%
10	0xf8ec24c7c2ae56952a0ea2f449a5c7b149426b09	913,499.536868022	0.9135%
11	0xcd6b44cfda01ffe377925937c679d3214c768d8c	856,331.76669966	0.8563%
12	0xa1e28a898b6d6a74f666c4e864507f6e69b7d940	725,509	0.7255%
13	XT.com Wallet 1	674,221.418068193	0.6742%
14	0xdd2d2283c32edd34526a89c04d9c8e5504cc784d	660,801.1122	0.6608%
15	0x210234aeaca8ca5818be42ad0f23935c956060ee	629,468.22443018	0.6295%
16	0x96aea7e91eff17a22dc04aefdd1b5b59f22f7c79	500,000.3175	0.5000%
17	0xb6e950017388c176e9d86afc143b67e52fd9e6c0	390,621.133428803	0.3906%
18	0xe45b6cb718149716b894fe9dea837333a9d9adc5	365,669.381754	0.3657%
19	0x9cb6a09006ce46c64a05e0ba101032782497227c	360,307.08067425	0.3603%
20	0x87438d624f22b81bfd75153ad8f2d642c762f9fc	313,662.43	0.3137%



# CoinToken Token Distribution

## CoinToken Contract Overview



# Contract functions details

## `+ [Lib] SafeMath`

`- [Int] mul`

`- [Int] div`

`- [Int] sub`

`- [Int] add`

## `+ Ownable`

`- [Pub] transferOwnership #`

`- modifiers: onlyOwner`

## `+ Pausable (Ownable)`

`- [Pub] pause #`

`- modifiers: onlyOwner, whenNotPaused`

`- [Pub] unpause #`

`- modifiers: onlyOwner, whenPaused`

## `+ ERC20Basic`

`- [Pub] balanceOf`

`- [Pub] transfer`

## `+ ERC20 (ERC20Basic)`

`- [Pub] allowance`

`- [Pub] transferFrom`

`- [Pub] approve`

## `+ StandardToken (ERC20)`

`- [Pub] transfer #`

`- [Pub] balanceOf`

`- [Pub] transferFrom #`

`- [Pub] approve #`

`- [Pub] allowance`

`- [Pub] increaseApproval #`

`- [Pub] decreaseApproval #`

`- [Int] _blackList #`

## `+ PausableToken (StandardToken, Pausable)`

`- [Pub] transfer #`

`- modifiers: whenNotPaused`

`- [Pub] transferFrom #`

`- modifiers: whenNotPaused`

`- [Pub] approve #`

`- modifiers: whenNotPaused`



# Contract functions details

-[Pub] increaseApproval #

-modifiers: whenNotPaused

-[Pub] decreaseApproval #

-modifiers: whenNotPaused

-[Pub] blacklistAddress #

-modifiers: whenNotPaused, onlyOwner

+CoinToken (PausableToken)

-[Pub] <constructor>

-[Pub] burn #

-[Int] \_burn #

-[Pub] mint #

-modifiers: onlyOwner

(\$) = payable function

# = non-constant function

# Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Low issue
2.	Missing Input Validation	Passed
3.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
4.	Possible delays in data delivery	Passed
5.	Oracle calls.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Passed
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	Private use data leaks.	Passed
13.	Malicious Event log.	Passed
14.	Scoping and Declarations.	Passed
15.	Uninitialized storage pointers.	Passed
16.	Arithmetic accuracy.	Passed
17.	Design Logic.	Passed
18.	Safe Open Zeppelin contracts implementation and usage.	Passed
19.	Incorrect Naming State Variable	Passed
20.	Too old version	Low issue



# Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to assets loss or data manipulations.
High	High-level vulnerabilities are difficult to exploit; however, they also have a significant impact on smart contract execution, e.g., public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to assets loss or data manipulations.
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.

# Security Issues

## ✔ Critical Severity Issues

No critical severity issue found.

## ✔ High Severity Issues

No high severity issue found.

## ✔ Medium Severity Issues

No medium severity issue found.

## ✔ Low Severity Issues

Two low severity issue found.

### 1. Old compiler version

#### • Description

Contract has been deployed using too old solidity version.

#### • Recommendation

It is advisable to deploy contract using any of the latest version of solidity

### 2. Unlocked Compiler Version.

#### • Description

The contract utilizes an unlocked compiler version. An unlocked compiler version in the contract's source code permits the user to compile it at or above a particular version. This, in turn, leads to differences in the generated bytecode between compilations due to differing compiler version numbers. This can lead to ambiguity when debugging as compiler-specific bugs may occur in the codebase that would be difficult to identify over a span of multiple compiler versions rather than a specific one.

#### • Recommendation

It is advisable that the compiler version is alternatively locked at the lowest version possible so that the contract can be compiled. For example, for version ^0.4.24 the contract should contain the following line:

```
pragma solidity 0.4.24;
```



# Centralization

## Owner privileges :

- Crypto Classic Contract:
  - Owner can transfer ownership.
  - Owner can mint.
  - Owner can pause/unpause transfers.
  - Owner can add black list addresses.

This smart contract has some functions which can be executed by the admin (Owner) only. If the admin wallet private key would be compromised, then it would create trouble, as smart contract ownership has not been renounced. Following are Admin functions:

- transferOwnership
- pause
- unpause
- blacklistAddress
- mint

# Conclusion

Smart contract contains low severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

HackSafe note: Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.