



**NOVOS**

## **KYC & AUDIT.**

Novos is an agency specializing in blockchain technology solutions, Audits, KYC / Doxx.



# CERTIFICATE OF COMPLIANCE

Smart Contract Audit by NOVOS



Sable Token

Audit Passed

09/09/2022

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# Audit Summary

This report has been prepared for Sable on the Dogechain network. Novos provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Ensuring contract logic meets the specifications and intentions of the client without exposing the user's funds to risk.
- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.
- Thorough line-by-line manual review of the entire codebase by industry experts.



## Project Overview

Parameter	Result
Address	0x432F0dD9a0863e5a165987c633bFe25552bdFAfA
Name	Sable
Token Tracker	SABLE
Decimals	9
Supply	1,000,000
Platform	Dogechain
Compiler	v0.8.4+commit.c7e474f2
Optimization	True with 200 runs
Other Settings:	default evmVersion
Language	Solidity
Codebase	<a href="https://explorer.dogechain.dog/address/0x432F0dD9a0863e5a165987c633bFe25552bdFAfA/contracts">https://explorer.dogechain.dog/address/0x432F0dD9a0863e5a165987c633bFe25552bdFAfA/contracts</a>
Url	<a href="https://sable.network/">https://sable.network/</a>

## Main Contract Assessed

Name	Contract	Live
<b>Sable</b>	0x432F0dD9a0863e5a165987c633bFe25552bdFAfA	Yes

# Smart Contract Vulnerability Checks

Vulnerability	Automatic Scan	Manual Scan	Result
❖ Unencrypted Private Data On-Chain	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Code With No Effects	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Message call with hardcoded gas amount	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Hash Collisions With Multiple Variable Length Arguments	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Unexpected Ether balance	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Presence of unused variables	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Right-To-Left-Override control character (U+202E)	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Typographical Error	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ DoS With Block Gas Limit	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Arbitrary Jump with Function Type Variable	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Insufficient Gas Griefing	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Incorrect Inheritance Order	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Write to Arbitrary Storage Location	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Requirement Violation	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Missing Protection against Signature Replay Attacks	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Weak Sources of Randomness from Chain Attributes	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>





# Smart Contract Vulnerability Checks

Vulnerability	Automatic Scan	Manual Scan	Result
❖ Authorization through tx.origin	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Delegatecall to Untrusted Callee	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Use of Deprecated Solidity Functions	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Assert Violation	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Reentrancy	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Unprotected SELFDESTRUCT Instruction	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Unprotected Ether Withdrawal	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Unchecked Call Return Value	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Outdated Compiler Version	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Integer Overflow and Underflow	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>
❖ Function Default Visibility	✓ Complete	✓ Complete	✓ <b>Low / No Risk</b>





# Contract Ownership

The contract ownership of Sable s is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

01

The current owner is the address `0xca25a86e086d17fec3626faef9405898bd95a195` which can be viewed from: [HERE](#)

02

The owner wallet has the power to call the functions displayed on the privileged functions chart below, if the owner wallet is compromised this privileges could be exploited.

03

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.



# Important Notes To The Users:



01

```
bool public initialDistributionFinished = false;  
bool public swapEnabled = true;  
bool public autoRebase = false;  
bool public isLiquidityInBnb = true;
```

02

```
uint256 public rewardYield = 3958125;  
uint256 public rewardYieldDenominator =  
10000000000;
```

03

```
uint256 public rebaseFrequency = 1800;  
uint256 public nextRebase = block.timestamp +  
31536000;
```

04

```
uint256 public constant MAX_FEE_RATE = 8;  
uint256 public constant MAX_FEE_BUY = 4;  
uint256 public constant MAX_FEE_SELL = 8;
```

05

```
address public usdtToken =  
0xE3F5a90F9cb311505cd691a46596599aA1A0AD  
7D; // dogechain mainnet
```

06

```
uint256 public liquidityFee = 1;  
uint256 public treasuryFee = 2;  
uint256 public buyFeeRFV = 1;  
uint256 public sellFeeTreasuryAdded = 4;
```

07

```
uint256 targetLiquidity = 50;  
uint256 targetLiquidityDenominator = 100;
```

08

```
function coreRebase(int256 supplyDelta)  
private returns (uint256) {  
uint256 epoch = block.timestamp;
```

09

```
function manualRebase() external nonReentrant{  
require(!inSwap, "Try again");  
require(nextRebase <= block.timestamp, "Not in time");
```

10

```
function setInitialDistributionFinished(bool _value)  
external onlyOwner {  
require(initialDistributionFinished != _value, "Not  
changed");
```

11

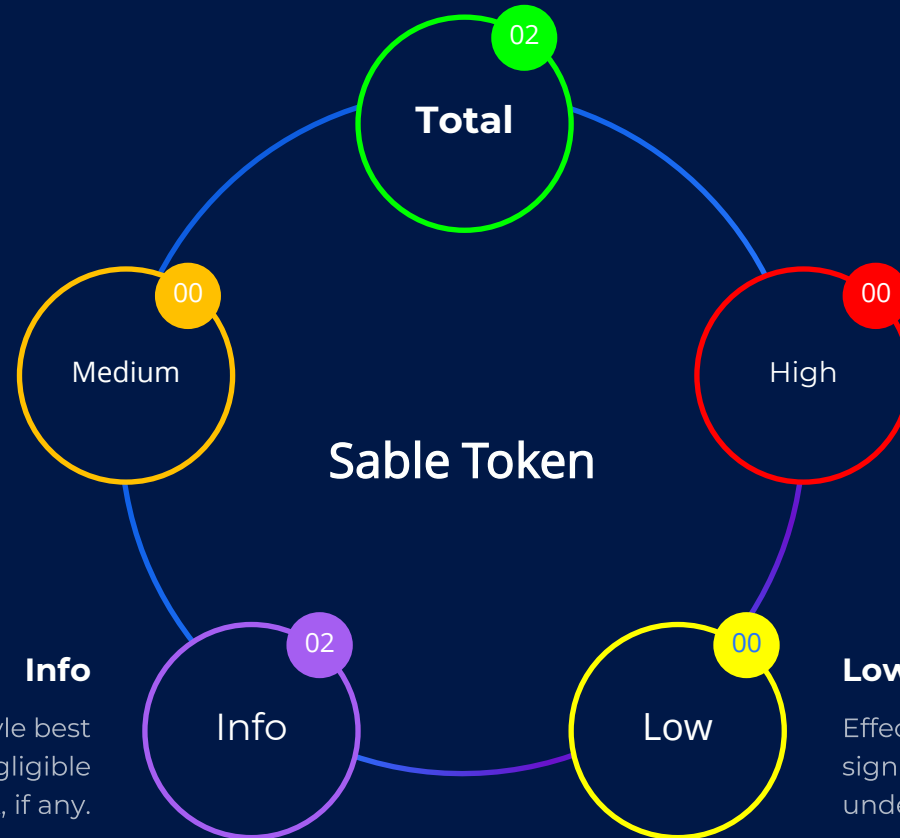
```
require(totalBuyFee <= MAX_FEE_BUY, "Total  
BUY fee is too high");  
require(totalSellFee <= MAX_FEE_SELL, "Total  
SELL fee is too high");
```

# Technical Findings Summary

## Classification of Issues

### Total

What you should pay attention to



### Medium

Bugs or issues with that may be subject to exploit, though their impact is somewhat limited. Issues under this classification are recommended to be fixed as soon as possible.

### High

Exploits, vulnerabilities or errors that will certainly or probabilistically lead towards loss of funds, control, or impairment of the contract and its functions. Issues under this classification are recommended to be fixed with utmost urgency

### Info

Consistency, syntax or style best practices. Generally pose a negligible level of risk, if any.

### Low

Effects are minimal in isolation and do not pose a significant danger to the project or its users. Issues under this classification are recommended to be fixed nonetheless.

# Findings

Public function that could be declared external



ID	Severity	Contract	Function
01	Informational	Sable	Functions: size, getKeyAtIndex, getIndexOfKey

## Description

Gas Optimization. Public function that could be declared external

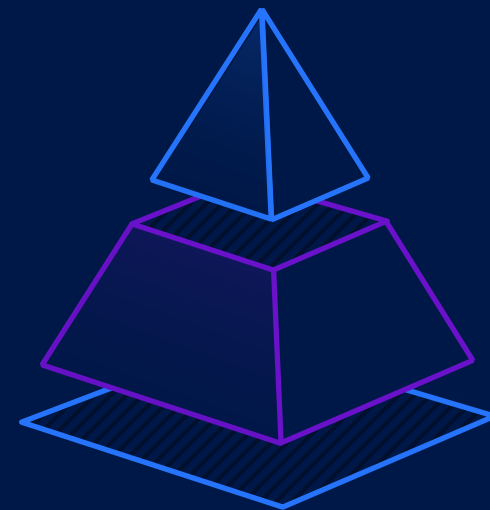
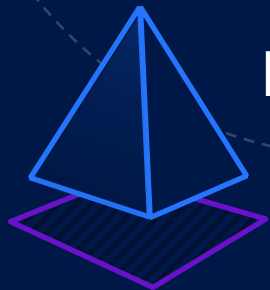
## Recommendation

Public functions that are never called by the contract should be declared external to save gas.



# Findings

## Missing events arithmetic



ID	Severity	Contract	Function
02	Informational	Sable	Missing events for setWalletBalance, setMaxBuyTransaction, setMaxSellTransaction, setSwapTokensAtAmount, setSellTransactionMultiplier

### Description

Functions that change critical arithmetic parameters should emit an event.

### Recommendation

Emit corresponding events for critical parameter changes.

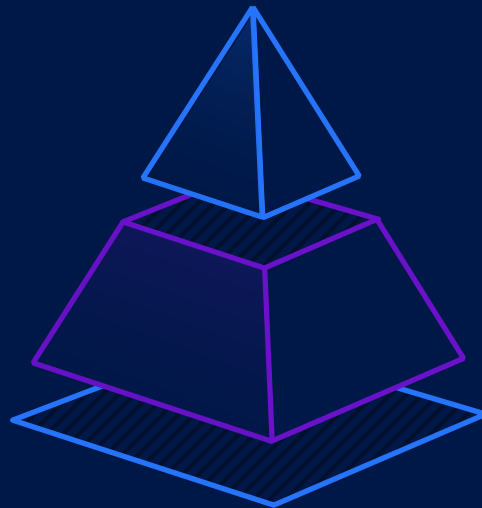


# Privileged Functions (onlyOwner & Others)

Function Name	Parameters	Visibility
✓ renounceOwnership	<ul style="list-style-type: none"><li>▪ none</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ transferOwnership	<ul style="list-style-type: none"><li>▪ address newOwner</li></ul>	<ul style="list-style-type: none"><li>▪ <b>public</b></li></ul>
✓ prepareForPartnerOrExchangeListing	<ul style="list-style-type: none"><li>▪ address_partnerOrExchangeAddress</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setWalletBalance	<ul style="list-style-type: none"><li>▪ uint256 _maxWalletBalance</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setMaxBuyTransaction	<ul style="list-style-type: none"><li>▪ uint256 _maxTxn</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setMaxSellTransaction	<ul style="list-style-type: none"><li>▪ uint256 _maxTxn</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ updateBusdDividendToken	<ul style="list-style-type: none"><li>▪ address _newContract</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ updateMarketingWallet	<ul style="list-style-type: none"><li>▪ address _newWallet</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setSwapTokensAtAmount	<ul style="list-style-type: none"><li>▪ uint256 _swapAmount</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setSellTransactionMultiplier	<ul style="list-style-type: none"><li>▪ uint256 _multiplier</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setTradingIsEnabled	<ul style="list-style-type: none"><li>▪ none</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setBusdDividendEnabled	<ul style="list-style-type: none"><li>▪ bool _enabled</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setMarketingEnabled	<ul style="list-style-type: none"><li>▪ bool _enabled</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ setSwapAndLiquifyEnabled	<ul style="list-style-type: none"><li>▪ bool _enabled</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ updatebusdDividendTracker	<ul style="list-style-type: none"><li>▪ address newAddress</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>
✓ updateUniswapV2Router	<ul style="list-style-type: none"><li>▪ address newAddress</li></ul>	<ul style="list-style-type: none"><li>▪ <b>external</b></li></ul>

# Privileged Functions (onlyOwner & Others)

Function Name	Parameters	Visibility
✓ <code>excludeFromFees</code>	▪ <code>address account, bool excluded</code>	▪ <b>public</b>
✓ <code>excludeFromDividend</code>	▪ <code>address account</code>	▪ <b>public</b>
✓ <code>setAutomatedMarketMakerPair</code>	▪ <code>address pair, bool value</code>	▪ <b>external</b>
✓ <code>updateGasForProcessing</code>	▪ <code>uint256 newValue</code>	▪ <b>external</b>
✓ <code>updateMinimumBalanceForDividends</code>	▪ <code>uint256 newMinimumBalance</code>	▪ <b>external</b>
✓ <code>updateClaimWait</code>	▪ <code>uint256 claimWait</code>	▪ <b>external</b>
✓ <code>processDividendTracker</code>	▪ <code>uint256 gas</code>	▪ <b>external</b>





# Statistics

## Liquidity Info



Parameter	Result
Pair Address	0x3830869867b95b974a2b632ba1da0ed310cfa428
SABLE Reserves	0 SABLE
Reserves, wDOGE	0 wDOGE
Liquidity Value	\$ 0

# Statistics

## Token (SABLE) Holders Info

Parameter	Result
SABLE Percentage Burnt	0 %
SABLE Amount Burnt	0 SABLE
Top 10 Percentage Own	100 %
Top 10 Amount Owned	1,000,000 SABLE

### Token Holders

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0xcA25a86e086D17FEc3626faEf9405898BD95A195  
1,000,000 SABLE 100.0000%





## Disclaimer

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