



Cyberscope

## Audit Report

# KimberLite Token

February 2023

|            |                                            |
|------------|--------------------------------------------|
| Type       | BEP20                                      |
| Network    | BSC                                        |
| Address    | 0x5Cb007F759d897E450D4B15Ac0EAe2001A0b35Ae |
| Audited by | © cyberscope                               |

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# Review

|                  |                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract Name    | KimberLiteToken                                                                                                                                             |
| Compiler Version | v0.8.7+commit.e28d00a7                                                                                                                                      |
| Optimization     | 200 runs                                                                                                                                                    |
| Explorer         | <a href="https://bscscan.com/address/0x5cb007f759d897e450d4b15ac0eae2001a0b35ae">https://bscscan.com/address/0x5cb007f759d897e450d4b15ac0eae2001a0b35ae</a> |
| Address          | 0x5cb007f759d897e450d4b15ac0eae2001a0b35ae                                                                                                                  |
| Network          | BSC                                                                                                                                                         |
| Symbol           | KIMBER                                                                                                                                                      |
| Decimals         | 18                                                                                                                                                          |
| Total Supply     | 200,000,000                                                                                                                                                 |

## Audit Updates

|               |             |
|---------------|-------------|
| Initial Audit | 06 Feb 2023 |
|---------------|-------------|

## Source Files

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Filename            | SHA256                                                           |
| KimberLiteToken.sol | 6a5b751ec68b5fe9dfe681af12abcaede7ccd5c9e9bdd0079d304a58df2874a9 |

# Analysis

● Critical ● Medium ● Minor / Informative ● Pass

| Severity | Code | Description                        | Status     |
|----------|------|------------------------------------|------------|
| ●        | ST   | Stops Transactions                 | Unresolved |
| ●        | OCTD | Transfers Contract's Tokens        | Passed     |
| ●        | OTUT | Transfers User's Tokens            | Passed     |
| ●        | ELFM | Exceeds Fees Limit                 | Passed     |
| ●        | ULTW | Transfers Liquidity to Team Wallet | Passed     |
| ●        | MT   | Mints Tokens                       | Passed     |
| ●        | BT   | Burns Tokens                       | Passed     |
| ●        | BC   | Blacklists Addresses               | Passed     |

## ST - Stops Transactions

|                    |                          |
|--------------------|--------------------------|
| <b>Criticality</b> | Minor / Informative      |
| <b>Location</b>    | KimberLiteToken.sol#L767 |
| <b>Status</b>      | Unresolved               |

### Description

The contract owner has the authority to stop the transactions for all users. The owner may take advantage of it by calling the `pause()` function. As a result, all of the contract's transactions will be paused.

```
require(!paused(), "KimberLiteToken: Contract is paused");
```

### Recommendation

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

# Diagnostics

● Critical   ● Medium   ● Minor / Informative

| Severity | Code | Description                    | Status     |
|----------|------|--------------------------------|------------|
| ●        | L09  | Dead Code Elimination          | Unresolved |
| ●        | L15  | Local Scope Variable Shadowing | Unresolved |
| ●        | L19  | Stable Compiler Version        | Unresolved |

## L09 - Dead Code Elimination

|                    |                              |
|--------------------|------------------------------|
| <b>Criticality</b> | Minor / Informative          |
| <b>Location</b>    | KimberLiteToken.sol#L633,684 |
| <b>Status</b>      | Unresolved                   |

### Description

In Solidity, dead code is code that is written in the contract, but is never executed or reached during normal contract execution. Dead code can occur for a variety of reasons, such as:

- Conditional statements that are always false.
- Functions that are never called.
- Unreachable code (e.g., code that follows a return statement).

Dead code can make a contract more difficult to understand and maintain, and can also increase the size of the contract and the cost of deploying and interacting with it.

```
function _beforeTokenTransfer(  
    address from,  
    address to,  
    uint256 amount  
) internal virtual {}  
  
function _setupDecimals(uint8 decimals_) internal {  
    _decimals = decimals_;  
}
```

### Recommendation

To avoid creating dead code, it's important to carefully consider the logic and flow of the contract and to remove any code that is not needed or that is never executed. This can help improve the clarity and efficiency of the contract.

## L15 - Local Scope Variable Shadowing

|                    |                          |
|--------------------|--------------------------|
| <b>Criticality</b> | Minor / Informative      |
| <b>Location</b>    | KimberLiteToken.sol#L669 |
| <b>Status</b>      | Unresolved               |

### Description

Local scope variable shadowing occurs when a local variable with the same name as a variable in an outer scope is declared within a function or code block. When this happens, the local variable "shadows" the outer variable, meaning that it takes precedence over the outer variable within the scope in which it is declared.

```
string memory symbol  
string memory name
```

### Recommendation

It's important to be aware of shadowing when working with local variables, as it can lead to confusion and unintended consequences if not used correctly. It's generally a good idea to choose unique names for local variables to avoid shadowing outer variables and causing confusion.

## L19 - Stable Compiler Version

|                    |                                                       |
|--------------------|-------------------------------------------------------|
| <b>Criticality</b> | Minor / Informative                                   |
| <b>Location</b>    | KimberLiteToken.sol#L8,34,106,197,281,309,664,693,736 |
| <b>Status</b>      | Unresolved                                            |

### Description

The `^` symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.0;
```

### Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.

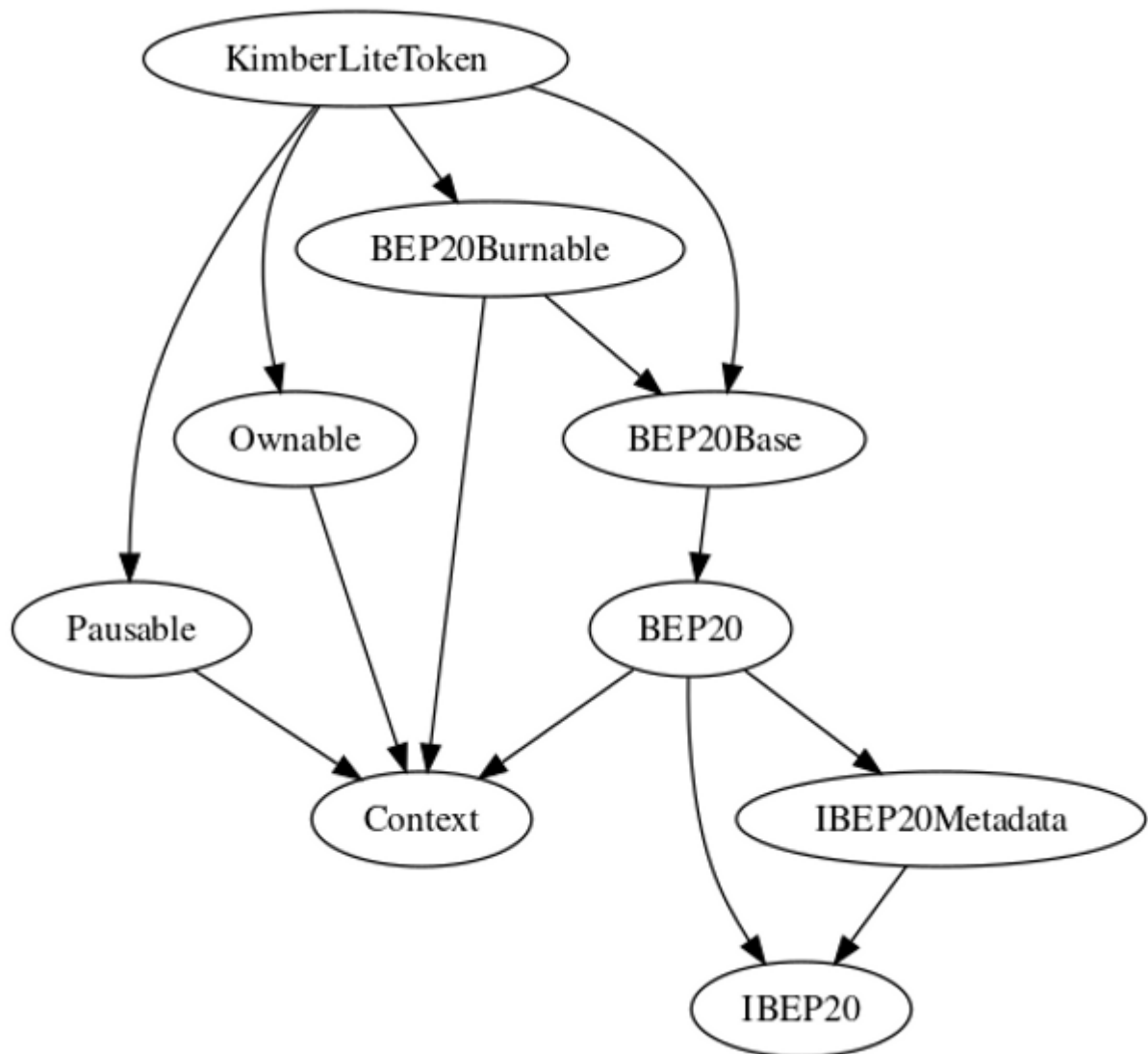
# Functions Analysis

| Contract | Type              | Bases      |            |               |
|----------|-------------------|------------|------------|---------------|
|          | Function Name     | Visibility | Mutability | Modifiers     |
| Context  | Implementation    |            |            |               |
|          | _msgSender        | Internal   |            |               |
|          | _msgData          | Internal   |            |               |
|          |                   |            |            |               |
| Ownable  | Implementation    | Context    |            |               |
|          |                   | Public     | ✓          | -             |
|          | owner             | Public     |            | -             |
|          | renounceOwnership | Public     | ✓          | onlyOwner     |
|          | transferOwnership | Public     | ✓          | onlyOwner     |
|          | _setOwner         | Private    | ✓          |               |
|          |                   |            |            |               |
| Pausable | Implementation    | Context    |            |               |
|          |                   | Public     | ✓          | -             |
|          | paused            | Public     |            | -             |
|          | _pause            | Internal   | ✓          | whenNotPaused |
|          | _unpause          | Internal   | ✓          | whenPaused    |
|          |                   |            |            |               |
| IBEP20   | Interface         |            |            |               |
|          | totalSupply       | External   |            | -             |
|          | balanceOf         | External   |            | -             |
|          | transfer          | External   | ✓          | -             |
|          | allowance         | External   |            | -             |
|          | approve           | External   | ✓          | -             |

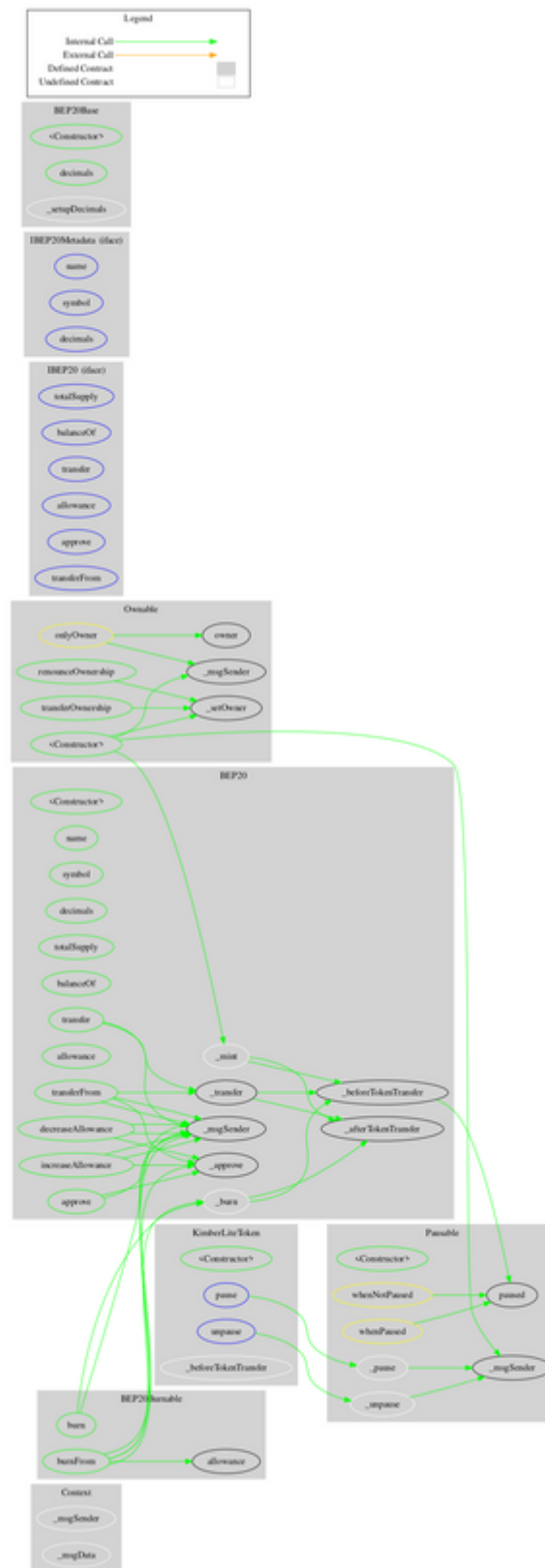
|                       |                      |                                           |   |   |
|-----------------------|----------------------|-------------------------------------------|---|---|
|                       | transferFrom         | External                                  | ✓ | - |
|                       |                      |                                           |   |   |
| <b>IBEP20Metadata</b> | Interface            | IBEP20                                    |   |   |
|                       | name                 | External                                  |   | - |
|                       | symbol               | External                                  |   | - |
|                       | decimals             | External                                  |   | - |
|                       |                      |                                           |   |   |
| <b>BEP20</b>          | Implementation       | Context,<br>IBEP20,<br>IBEP20Meta<br>data |   |   |
|                       |                      | Public                                    | ✓ | - |
|                       | name                 | Public                                    |   | - |
|                       | symbol               | Public                                    |   | - |
|                       | decimals             | Public                                    |   | - |
|                       | totalSupply          | Public                                    |   | - |
|                       | balanceOf            | Public                                    |   | - |
|                       | transfer             | Public                                    | ✓ | - |
|                       | allowance            | Public                                    |   | - |
|                       | approve              | Public                                    | ✓ | - |
|                       | transferFrom         | Public                                    | ✓ | - |
|                       | increaseAllowance    | Public                                    | ✓ | - |
|                       | decreaseAllowance    | Public                                    | ✓ | - |
|                       | _transfer            | Internal                                  | ✓ |   |
|                       | _mint                | Internal                                  | ✓ |   |
|                       | _burn                | Internal                                  | ✓ |   |
|                       | _approve             | Internal                                  | ✓ |   |
|                       | _beforeTokenTransfer | Internal                                  | ✓ |   |
|                       | _afterTokenTransfer  | Internal                                  | ✓ |   |
|                       |                      |                                           |   |   |
| <b>BEP20Base</b>      | Implementation       | BEP20                                     |   |   |

|                        |                      |                                                          |   |           |
|------------------------|----------------------|----------------------------------------------------------|---|-----------|
|                        |                      | Public                                                   | ✓ | BEP20     |
|                        | decimals             | Public                                                   |   | -         |
|                        | _setupDecimals       | Internal                                                 | ✓ |           |
|                        |                      |                                                          |   |           |
| <b>BEP20Burnable</b>   | Implementation       | Context,<br>BEP20Base                                    |   |           |
|                        | burn                 | Public                                                   | ✓ | -         |
|                        | burnFrom             | Public                                                   | ✓ | -         |
|                        |                      |                                                          |   |           |
| <b>KimberLiteToken</b> | Implementation       | BEP20Base<br>,<br>BEP20Burnable,<br>Ownable,<br>Pausable |   |           |
|                        |                      | Public                                                   | ✓ | BEP20Base |
|                        | pause                | External                                                 | ✓ | onlyOwner |
|                        | unpause              | External                                                 | ✓ | onlyOwner |
|                        | _beforeTokenTransfer | Internal                                                 | ✓ |           |

# Inheritance Graph



# Flow Graph



## Summary

KimberLite Token is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. Additionally, it should be noted that the owner has the authority to pause and unpaue the transactions at any time.

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Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



The Cyberscope team

<https://www.cyberscope.io>